4K96-31

PROJECT OPERATIONAL PLAN FOR THE 1994 BRISTOL BAY RED KING CRAB TEST FISHERY PROJECT

by

Leslie J. Watson
and
Douglas Pengilly

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Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
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Kodiak, Alaska 99615

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ALASKA DEPARTMENT FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

PROJECT OPERATIONAL PLAN

Title:	Bristol Bay Red King Crab Test Fishery Project	
Yellowbook Project No.:	TF-960 (Appendix A)	
Project Leader:	Leslie J. Watson	PCN:1857
Biometrician:	Douglas Pengilly	PCN:1227
Date Submitted:	December 1995	
Region:	Westward	
Fishery Unit:	Bering Sea/Aleutian Islands Crab	
Fishery:	Bristol Bay Red King Crab	
Fishery Management Plan:	Fishery Management Plan for the Commercial King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands	
File Name:	C:\POP\POP94LJW.95	

APPROVALS

Level	Signature	Date
Project Leader:	_____	_____
Regional Biometrician:	_____	_____
Research Supervisor:	_____	_____
Regional Supervisor:	_____	_____
Headquarter's Receipt:	_____	_____
Headquarter's Approval:	_____	_____
Headquarter's Recommendation:		
Further Review:	_____	_____
Approval:	_____	_____

FOREWORD

This project, funded under the State of Alaska Bering Sea crab test fishery program, is in its fifth year. Due to the closure of the 1994 Bristol Bay commercial red king crab fishery, plans for a large-scale at-sea tagging survey and tag recovery effort were dropped. The proposed 1994 tagging study was the last preliminary study prior to full implementation; and was a continuation of Bristol Bay red king crab tagging studies initiated in 1989. Operational plans for 1990, 1991, 1992, and 1993 are documented in Watson and Pengilly (1993b, 1992, 1993a, and 1994, respectively).

The FY95 project has four components: 1) a 30-d charter to conduct a systematic survey of a portion of the Bristol Bay red king crab population; 2) collect crabs for project cost recovery; 3) funding support for the development of an imaging processor for Tanner, snow and hybrid crab identification initiated in December 1992 (W. Donaldson, Alaska Department of Fish and Game, Kodiak, personal communication); and 4) funding for Tanner and snow crab genetic stock identification studies initiated July 1992 (S. Merkouris, Alaska Department of Fish and Game, Anchorage, personal communication).

The total budget for the Bering Sea crab test fishery program is $454,600: $403,000 for the 1994 Bristol Bay red king crab test fishery program, $35,000 for the image processing project, and $16,200 for the genetics component (Appendix A). For purposes of this operational plan, only the 1994 pot survey will be described

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) has investigated the possible applications of passive integrated transponder (PIT) tags to mark-recapture studies of mature male red king crabs *Paralithodes camtschaticus* in the Bristol Bay fishery (Pengilly and Watson 1992a, Watson et al. 1991). As mentioned above, the planned tagging project was dropped from this year's program objectives due to the closure of the 1994 Bristol Bay commercial king crab fishery.

In place of a tagging survey, an intensive systematic pot survey will be conducted in a portion of Bristol Bay to determine relative catch and distribution of red king and Tanner *Chionoecetes bairdi* in that area. Biological data on all crabs caught in survey pots will be enumerated as described by Watson and Pengilly (1994). We will also determine the feasibility of completing survey objectives at all stations within the stated time frame for the survey. Determination of the number of stations that can be surveyed is key to future tagging surveys, especially in achieving distribution of tagged crabs over the largest, most representative legal red king crab habitat area.

Finally, a prototype automated PIT tag detector will be constructed and installed on the primary crab processing line at Alyeska Seafoods in Dutch Harbor AK. The new design will be evaluated in terms of applicability to other processing line configurations.

OBJECTIVES

The objectives of the 1994 Bering Sea crab test fishery program are listed below.

Bristol Bay Pot Survey and Cost Recovery Charter

I. Determine the distribution of red king crab and Tanner crab by sex, size, and shell age in the 1994 pot survey. Document handling-induced injury or mortality rates of red king and Tanner crabs in survey and cost recovery pots.

II. Determine the catch-per-pot of legal male red king crabs in survey pots and in cost recovery fishing pots.

III. Characterize the reproductive condition of females collected in pot survey catches.

IV. Catch approximately 14,000 male red king crabs $\geq$ 6 inches carapace width (CW) for delivery to Royal Aleutian Seafoods in Dutch Harbor on 25 October 1994.

V. Catch and retain specified crabs for the following projects:

1. An observer practicum to be held onboard the F/V *Kristen Gail* in Dutch Harbor, 25 October 1994. Samples of each crab species caught in survey or cost recovery pots will be retained.

2. Alaska Department of Environmental Conservation paralytic shellfish poison (PSP) testing of red king crab, C. bairdi, C. opilio and Tanner crab hybrids.

Automated PIT Tag Detection Project

I. Assess the future applicability of PIT tags to mark-recapture studies of red king crabs in light of the current depressed condition of the Bristol Bay red king crab stock.

II. Develop and test a new automated PIT tag detection system for crab processing lines. Identical PIT tag detectors will be installed at two sites on a crab processing line in Dutch Harbor, AK.

1. The performance of each new detector will be assessed by passing 100 PIT-tagged red king crab carapace tail assemblies through the detector system as described in Appendix B.

2. If the new detector performs acceptably, installation of the detector at different processing sites and crab processing lines will be assessed for future PIT tag recovery efforts.

METHODS

At-Sea Survey

The study will be conducted aboard the test fishery charter vessel, FV *Kristen Gail* from September 25 to October 25, 1994. Sampling of the survey area will occur during the first two weeks of the 30-d charter, and will likely overlap with cost recovery fishing into the third week or until cost recovery fishing becomes essential in order to meet the stated funding goal.

A standard survey area has been established as the basis for all future pot surveys and is generally located from 56° to 57°30' N latitude and from 161° to 164° W longitude (Figure 1). The standard grid was based on legal male and mature female red king crab distributions as determined from annual ADF&G Bristol Bay pot surveys from 1990 to 1993 (e.g., Byersdorfer and Watson 1992) and the 1994 National Marine Fisheries Service (NMFS) eastern Bering Sea trawl survey (Figure 2), and areas targeted during historic king crab fisheries (e.g., Morrison and Gish 1994).

Survey Area

A number of alternative survey grids were considered for the 1994 survey (Table 1). Selection of grid number four was based on several factors: 1) the number of survey days allotted for this study, 2) coverage, or the percentage of NMFS estimated legal male and mature female red king crab abundances that fall within each alternative survey grid, and 3) survey efficiency, expressed as the coverage of legal male and mature female red king crabs per station in each alternative survey grid (Table 2). Coverage of legal male (38%) and mature female (27%) crab abundance as determined by

NMFS was highest within grid four. Survey efficiency estimates per station for males and females was also greatest in grid four, at 0.23% and 0.17%, respectively (Table 2).

Survey Design

The survey grid will consist of a minimum of 162, four-pot stations. Each survey station will consist of four pots spaced 1/8 (0.125) nm apart in an east - west line. The station grid with assigned station numbers is shown in Figure 3; the location of the first pot in each station represents the eastern-most pot in each station (Appendices C.1 and C.2). The standard soak time for each survey pot will be 2 days (48 hrs) with an acceptable range of 1.5 to 2.5 days. Soak time must be standard in order to compare pot catches within stations and between stations.

Survey stations are arrayed in blocks of nine stations (each block contains 36 pots); the survey will begin at station 118 in block one (Figure 3). Block numbers are not strata designations; they are subunits of the grid to facilitate coverage of the survey area on a daily basis. A total of two blocks or 72 pots per day will be worked, including pots pulled and sampled and pots set. The daily sampling objective is based on the average sampling efforts achieved in previous ADF&G pot surveys. In the 1990 survey, an average of 108 pots per day were pulled and/or set) versus an average of 56 pots per day in 1991.

Concentrations of male crabs > 6 in CW were identified during the 1993 cost recovery fishing effort. A suggested pathway for working through the blocks so that the vessel is situated near these concentrations is shown in Figure 4. The intent here is to begin scouting for cost recovery areas early in the survey so that the captain has advance knowledge for later intensive cost recovery fishing. A suggested itinerary for the survey vessel is shown below.

Dates	Itinerary
9/25-26	Depart Dutch Harbor-travel to fishing grounds.
9/27-10/7	Set survey pots starting at block one.
10/7	Assess cost recovery potential in block nine and continue setting/picking survey pots.
10/18-23	Cost recovery fishing (adjust earlier or later to achieve cost recovery goals).
10/23-25	Travel to Dutch Harbor-deliver cost recovery crabs to Royal Aleutian and host shellfish observer practicum.

Sampling Procedures

Sampling will occur within survey stations and cost recovery strings. Crabs will be sampled almost identically in both pot types (survey and cost recovery); however, sampling goals for cost recovery pots will be somewhat reduced. Crabs in both survey and cost recovery pots will be handled gently during sampling and will be released by placing, not dropping, each crab in the water trough, with the abdomen or ventral side down. Each release shall be done while the vessel is stopped or, if necessary, just making enough headway to stay out of the trough during rough seas.

Crabs caught in both survey and cost recovery pots will be sampled to characterize species, size and sex composition within the survey area. Crabs from each sampled pot will be sorted by species and

sex; all legal male red king crabs will be counted in each pot in every survey station and cost recovery string and recorded on the Legal Male Red King Crab Tally (Appendix D.1).

Survey Pot Catches. Red king crabs will be sorted into three groups: legal male crabs (6.5 in CW), sub-legal male crabs (< 6.5 in CW), and females. A total of 30 crabs in each of the three groups will be sampled and the remainder will be counted.

Chionoecetes bairdi Tanner crabs will also be sorted into three groups: legal male crabs (5.5 in CW), sub-legal male crabs (< 5.5 in CW), and females. A total of 20 crabs in each of the three groups will be sampled and the complete catch of each group will be tallied.

For red king crabs and *C. bairdi* crabs, data will be recorded on either the Male or Female Crab Research Form (Appendices D.2 and D.3).

The catch of *C. opilio*, Tanner crab hybrids and other incidental crab species in survey pots is usually minimal. However, the incidence of Korean hair crabs in survey pots has steadily increased since 1991 (Byersdorfer and Watson 1992), and more recently, mating pairs have also been observed in test fishery catches (D. Tracy, Alaska Department of Fish and Game, 211 Mission Rd, Kodiak, personal communication). The overall paucity of information on these crabs makes sampling of them whenever they are caught a high priority.

For Korean hair crabs and other incidental crab species, data will be recorded on the Research Crab Form (Appendix D.4).

Cost Recovery Catches. Catches of legal male red king crabs 6.5 inches CW will be documented in each cost recovery pot on the Legal Male Red King Crab Tally (Appendix D.1). Cost recovery catches will be monitored 24 hours a day so that random catch sampling objectives can be met. Additionally, male red king crabs 6.0 inches CW that are retained for delivery will be documented at each pot on the Pilot House Log - Survey Stations or the Pilot House Log - Cost Recovery Strings (Appendices D.5 and D.6).

A minimum of 10 cost recovery pots per day will be sampled in the same manner as survey pots. Crabs in the ten cost recovery pots will be grossly examined for handling-induced injury or mortality. If sampling conditions are unsafe or sampling efforts are severely hampering cost recovery objectives, sampling of cost recovery sampling pots will be suspended.

Crab Collections

Shellfish Observer Program. The ADF&G shellfish observer program staff has requested that a small number of live crabs be collected during the charter for observer candidate testing. Both sexes of crabs will be collected for red king crabs, *C. opilio*, *C. bairdi*, Korean hair crabs and any other incidental crab species caught.

Paralytic Shellfish Poison Testing. The Alaska Department of Environmental Conservation (DEC) has requested samples from survey and/or cost recovery catches of red king and Tanner crabs for subsequent analysis of PSP levels in commercially-important Bering Sea crabs. Crab samples will be

collected from each statistical area fished during the survey, frozen and delivered to DEC personnel in Dutch Harbor at the end of the survey.

Cost Recovery Fishing

An estimate of 70,000 to 100,000 pounds of male red king crabs ≥ 6 in CW will be captured and sold to Royal Aleutian Seafoods in Dutch Harbor, AK to cover the cost of the project (including the vessel charter cost). The entire delivery of cost recovery crabs will be used to train and test mandatory shellfish observers; any male *C. bairdi* Tanner crabs ≥ 5.25 in CW may be sold following the observer practicum. The off-loading of the crabs will be monitored by ADF&G to ensure accurate counting of the crabs for the fish ticket and subsequent payment to the State of Alaska for the sale of the crabs.

Red king crabs will be sold at $5.21 per pound and any saleable *C. bairdi* at $2.00 per pound.

Automated PIT Tag Detector Trials

An automated PIT tag detection system was developed in 1991 as a means of interrogating large numbers of processed crabs for the presence of PIT tags (Watson and Pengilly 1992). PIT tag detection trials were conducted using the automated system to estimate the detection rate of tagged crabs under simulated processing conditions and during actual processing of red king crabs. Results from this study indicated that the use of automated detector systems could reliably provide a high (greater than 94%) detection rate of PIT-tagged crabs under actual processing conditions (Pengilly and Watson 1994).

The four panel detection system was custom-fitted to the processing line at Westward Seafoods in Dutch Harbor AK; and was therefore not configured for easy transfer to other processing line designs. Additionally, the system was quite bulky; an assessment of smaller processing lines demonstrates that the current system is too large for installation on catcher-processors and smaller shore-based crab processors. Two of the four antenna panels (69 cm X 51 cm X 6 cm) were mounted above the waste conveyor and were placed such that waste flow up the conveyor was significantly impeded. Finally, the expense of custom detectors with attendant engineering support necessary to implement a full-scale PIT tag recovery program is too costly for the current test fishery budget. For these reasons, development of a portable automated system that is adaptable to a wide range of processing lines is the primary goal of the 1994 test fishery project.

Field testing of a new automated Crab Identification System (CIS) PIT tag detector built by InfoPet Identification Systems, Inc. (Burnsville MN) will be conducted in November 1994. Alyeska Seafoods in Dutch Harbor, AK has been selected for the installation of identical PIT tag detectors at two sites on the primary crab processing line. The performance of each detector will be assessed by passing 100 PIT-tagged red king crab carapace tail assemblies through the detector system under established acceptance criteria (Appendix B). The waste tank CIS will be installed near the waste outflow trough; the conveyor CIS will be installed within the primary crab processing convertor belt. Schematics of each CIS installation and other operational parameters are fully detailed in Appendix E.

If the new detectors meet the acceptance criteria, installation of the detector at different processing sites and crab processing lines will be assessed for future PIT tag recovery efforts.

SCHEDULES

7/93-8/94	Project planning (Watson, Pengilly)
5/94	Site inspection for installation of automated PIT tag detection units (Watson, Tracy)
6/94	Secure FV *Kristen Gail* vessel charter (Watson) (Appendix F)
6/94-8/94	Survey preparations (Byersdorfer, Tracy)
9/94-10/94	Survey (Byersdorfer, Tracy, Golembeski, Hobart)
11/94	Survey data editing and entry (Watson, Byersdorfer)
11/94-12/94	Automated PIT tag detector trials (Watson, Pengilly)
11/94-3/95	Data analysis and report writing (Watson, Pengilly, Byersdorfer)

REPORTS

Byersdorfer, S.C,. L.J. Watson, and D. Tracy. 1995. A summary of biological data collected during the 1994 Bristol Bay red king crab test fishery charter. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report No. 4K95-33, Kodiak.

Watson, L.J., and D. Pengilly. 1996. Automated Passive Integrated Transponder (PIT) tag detection system trials, 1994. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report No. 4K96-xx, Kodiak.

PERSONNEL

The Bristol Bay test fish project supports 30 man-months of personnel time, including one full-time FBIII (L. Watson - 12 mm); two full-time FB IIs (D. Tracy - 5 mm; S. Merkouris {Genetics-ANC} 3 mm); and several seasonal positions (S. Byersdorfer FB I - 6 mm; K. Hobart FB I - 1 mm; K. Phillips FT III - 1 mm; K. Rudge FT III -1 mm; Vacant FT III - 1 mm). Short-term seasonal personnel are either onboard pot surveys or involved in tagged crab recovery. Long-term seasonals and full-time personnel that are partially supported by the project also write reports and perform logistics related to the project (excluding S. Merkouris). All personnel, including the project leader, provide assistance to shellfish management and observer projects on an as-needed basis.

LITERATURE CITED

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Watson, L.J., and D. Pengilly. 1992. Project operational plan for the 1991 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Informational Report 4K92-31, Kodiak.

Watson, L.J., and D. Pengilly. 1993a. Project operational plan for the 1992 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Informational Report 4K93-5, Kodiak.

Watson, L.J., and D. Pengilly. 1993b. Project operational plan for the 1990 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Informational Report 4K93-17, Kodiak.

Watson, L.J., and D. Pengilly. 1994. Project operational plan for the 1993 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Informational Report 4K94-27, Kodiak.

Watson, L. J., D. Pengilly, W.E. Donaldson, and D. Schmidt. 1991. A pilot mark recapture study using external tags and implantable Passive Integrated Transponder (PIT) tags on red king crab in Bristol Bay, Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K91-21, Kodiak.

Table 1. Alternative grids for the 1994 Bristol Bay red king crab test fishery survey.

Grid	Number Stations	NW Corner	NE Corner	SW Corner	SE Corner
1	128	56.96 N 163.97 W	56.96 N 161.73 W	56.37 N 163.97 W	56.37 N 161.73 W
2	144	56.96 N 163.97 W	56.96 N 161.42 W	56.37 N 163.97 W	56.37 N 161.42 W
3	160	56.96 N 163.97 W	56.96 N 161.11 W	56.37 N 163.97 W	56.37 N 161.11 W
4	162	57.04 N 163.97 W	57.04 N 161.42 W	56.37 N 163.97 W	56.37 N 161.42 W
5	144	57.04 N 163.97 W	57.04 N 161.73 W	56.37 N 163.97 W	56.37 N 161.73 W
6	160	57.12 N 163.97 W	57.12 N 161.73 W	56.37 N 163.97 W	56.37 N 161.73 W

Grid 1: the original grid (16 columns, 8 rows, 5 nm apart)
Grid 2: add two columns to east of Grid 1 (18 columns, 8 rows)
Grid 3: add four columns to east of Grid 1 (20 columns, 8 rows)
Grid 4: add two columns to east and 1 row to north of Grid 1 (18 columns, 9 rows)
Grid 5: add one row to north of Grid 1 (16 columns, 9 rows)
Grid 6: add two rows to north of Grid 1 (16 columns, 10 rows)

Table 2. Estimated coverage and efficiency of alternative grids for the 1994 ADF&G pot survey relative to NMFS survey distributions of legal male and mature female red king crabs in the 1990-1994 surveys. Coverage is the estimated percentage of the total NMFS survey estimate (catch/nm^2) that falls within each alternative survey grid. Efficiency per station is coverage divided by the number of stations in each alternative survey grid.

	Legal Male Crabs		Mature Female Crabs	
Grid	Coverage	Efficiency per Station	Coverage	Efficiency per Station
1	20%	0.16%	10%	0.08%
2	29%	0.20%	14%	0.10%
3	31%	0.19%	15%	0.09%
4	38%	0.23%	27%	0.17%
5	31%	0.22%	18%	0.13%
6	35%	0.22%	21%	0.13%

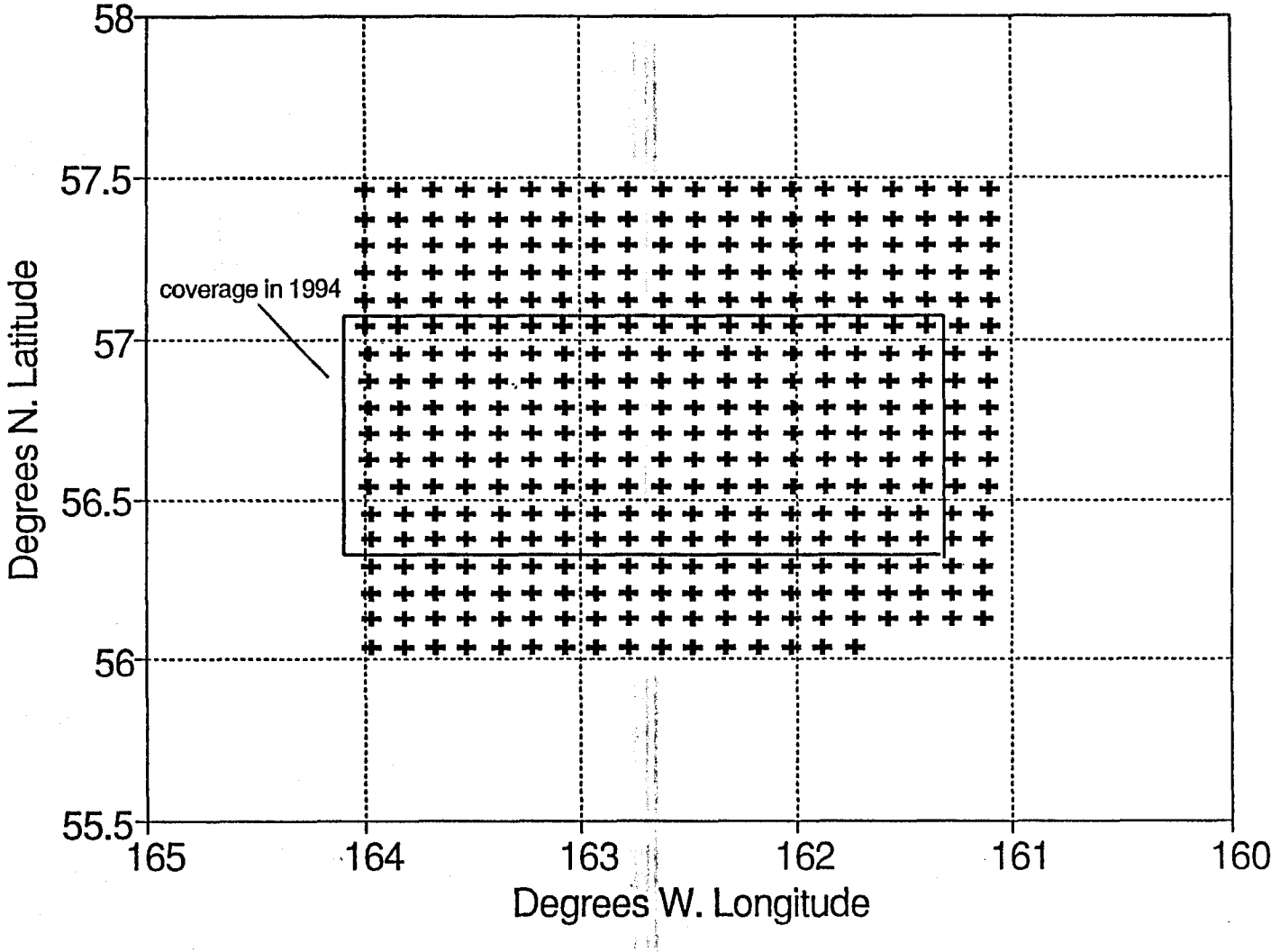
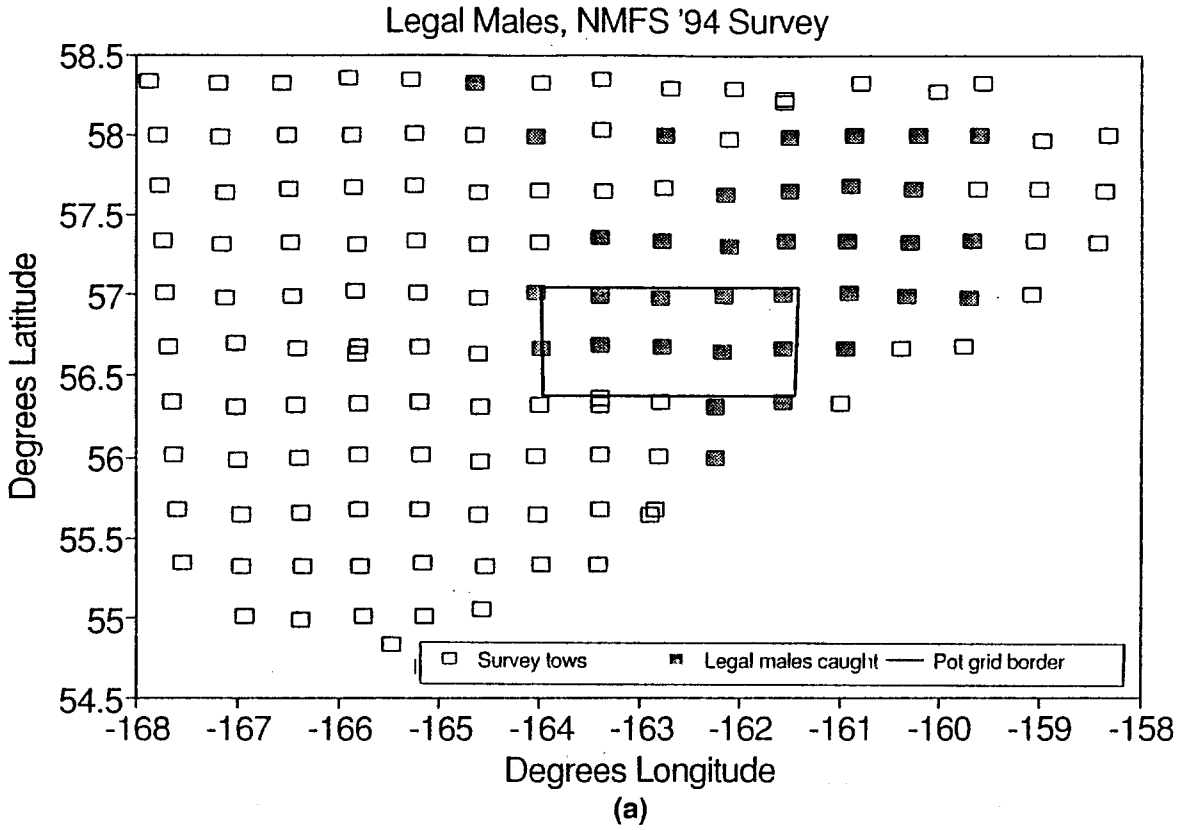


Figure 1. Proposed location of the 1994 ADFG Bristol Bay red king crab pot survey within the standard survey grid.



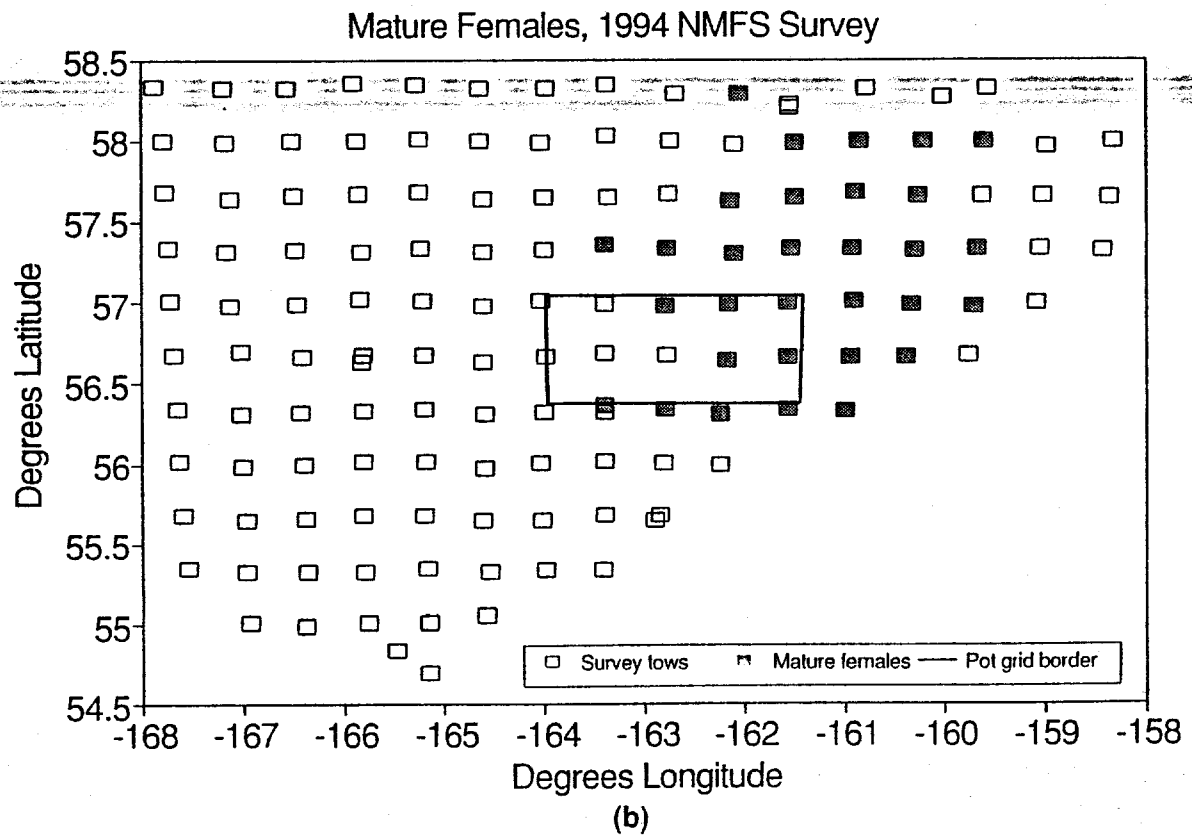


Figure 2. Distributions of legal male (a) and mature female (b) red king crabs from the 1994 NMFS trawl survey.

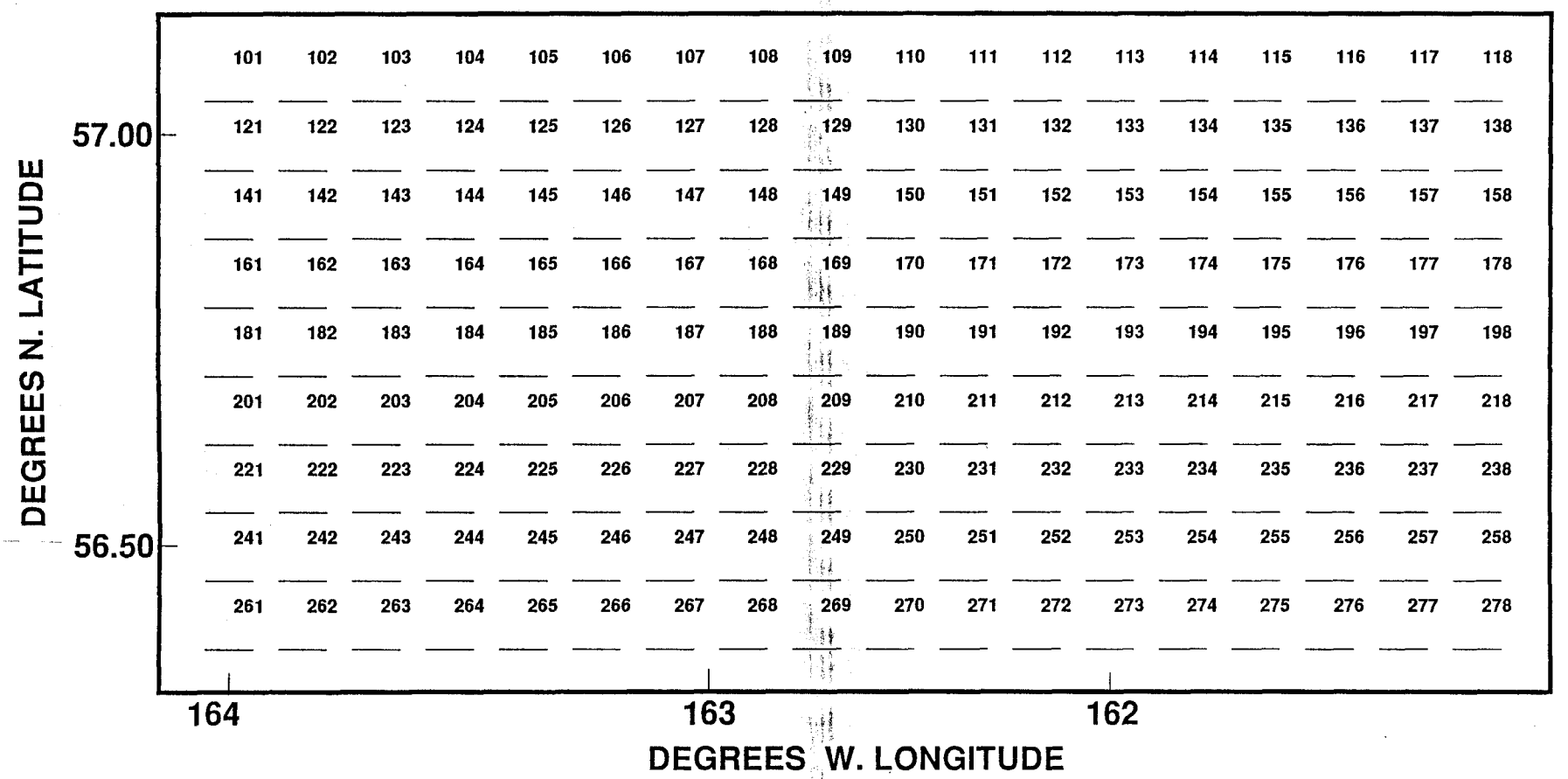


Figure 3. Layout of the 162 survey stations in the 1994 Bristol Bay red king crab test fishery survey.

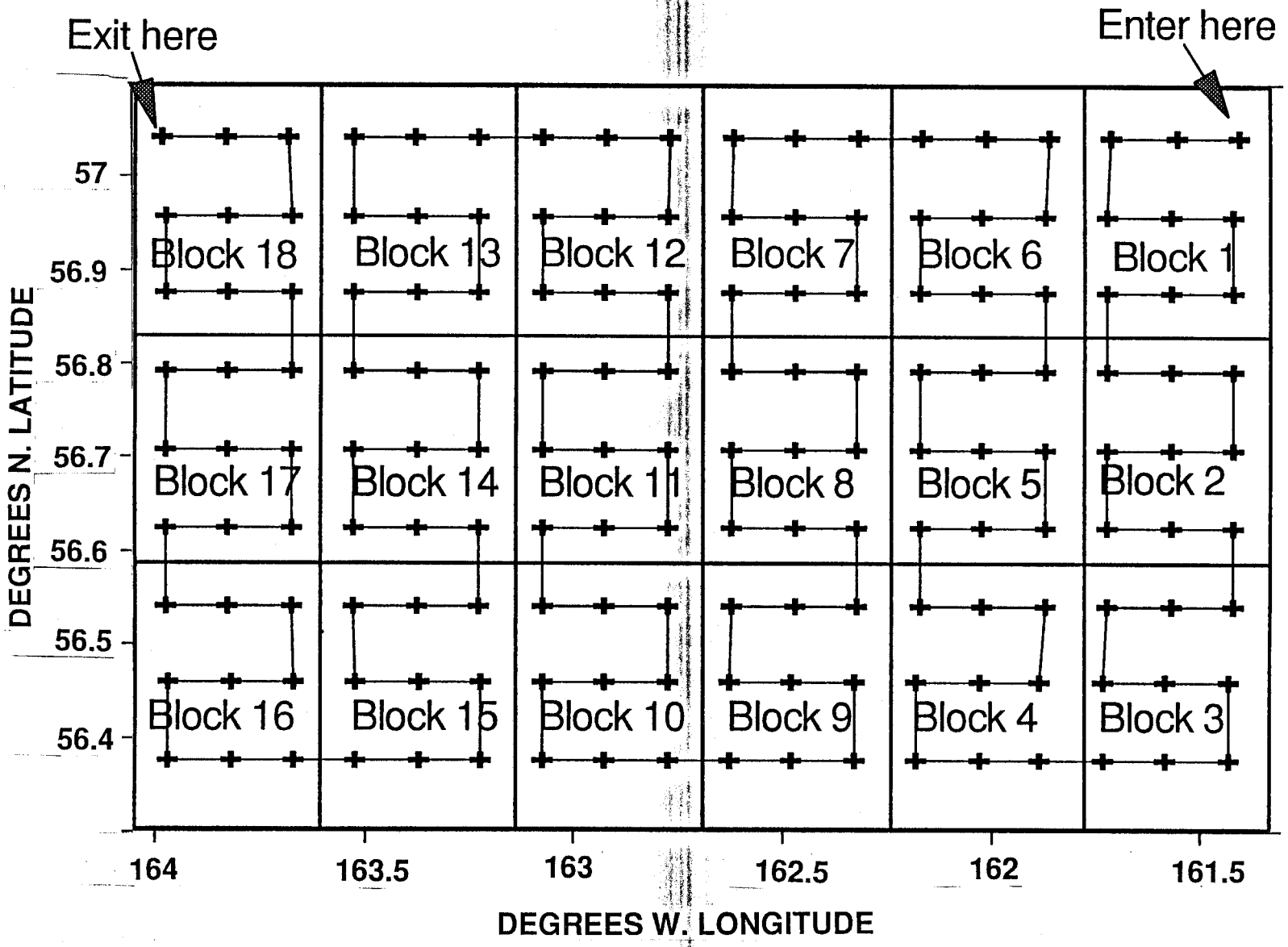


Figure 4. Block array and pathway of the 162-station survey grid for the 1994 Bristol Bay red king crab test fishery survey.

APPENDIX

PROJECT TITLE: Bering Sea Crab Test Fishing
PROJECT NUMBER: TF-960
FISHERY UNIT: Bering Sea/Aleutians Crab
LEDGER: 74119751
COMPONENT: Fishery Management BPS# 3800
PRINTORD: No order
LOCATION: Kodiak
REGION: 4
SUBCOMPONENT: Test Fish Funds
PRIORITY: 1.00
LEGISLATIVE DISTRICTS : 27

PROGRAM ELEMENT: Test Fish Survey
FISHERIES AFFECTED: Bering Sea Crab

USER GROUPS AFFECTED: Commercial

SPECIES AFFECTED: King Crab and Tanner Crab

PROJECT DESCRIPTION

Funding from this project will support the State's direct expenses for conducting shellfish tagging projects and genetics investigations in the Bering Sea. The Bristol Bay red king crab harvest was valued recently in excess of $100 million. Error in estimating natural mortality rates and population abundances can jointly provide major errors in development of Guideline harvest levels. Additional Bering Sea Tanner species and stock I.D. development research can be conducted.

PROJECT OBJECTIVES

Bering Sea crab populations are assessed to provide information for development of guideline harvest levels. Data will be collected on all crab captured during the surveys. Long term tag recovery data should provide information on natural mortality rates to be used in estimating harvest rates designed to meet conservation and economic objectives established by the BOF.

BUDGET MANAGER: 1857 - Leslie J. Watson - Marine Fisheries Biologist

BUDGET DETAIL:	PRIOR YEAR ALLOCATIONS			PAGE2	
CODE/LINE ITEM	FY92	FY93	FY94	SUMMARY	
	=====	=====	=====	========	95.6 PFT
100 PERSONAL SERV	98.5	160.7	165.4	200.5	105.0 Other
200 TRAVEL	25.4	22.1	22.1	15.3	
300 CONTRACTUAL	393.7	223.2	223.2	222.8	
400 COMMODITIES	24.6	53.5	49.2	9.0	
500 EQUIPMENT	125.5	0.0	0.0	7.0	
700 GRANTS	***	***	0.0	0.0	
	=======	=======	=======	=======	
PROJECT TOTALS:	667.7	459.5	459.9	454.6	
FEDERAL RECEIPTS	0.0	0.0	0.0	0.0	
GENERAL FUND	0.0	0.0	0.0	0.0	
INTERAGENCY RECPTS	0.0	0.0	0.0	0.0	
PROGRAM RECEIPTS	667.7	459.5	459.9	454.6	
GENERAL FUND MATCH	0.0	0.0	0.0	0.0	
FISH AND GAME FUND	***	***	0.0	0.0	
CIP FUNDS	***	***	0.0	0.0	
STAFF MONTHS	13.2	26.	29.	30.	

YELLOWBOOK PAGE 2 PROJECT DESCRIPTION

Salaries computed using FY95 rates.

PROJECT TITLE: Bering Sea Crab Test Fishing
PROJECT NUMBER: TF-960
UNIT: Bering Sea/Aleutians Crab
LEDGER CODE: 74119751
COMPONENT: Fishery Management BPS# 3800
PRINT ORDER: No order
REGION: 4

PERSONAL SERVICES DATA

PCN	TITLE & NAME	R	S	LOC	Range 94	Range 95	MM	days SEADUTY SWD	days SEADUTY RDO	hours Premium Pay OT	hours Premium Pay HAZ	hours Premium Pay SHIFT	TOTAL COST
1117	FB I - Byersdorfer, Su	A	S	CAA	14E	14E	6.0	22	8	50.	0.	0	$36,597
1351	FB II - Tracy, Donn	A	S	BKB	16B	16C	5.0	22	8	0.	0.	0	$36,573
1390	FB II - Merkouris, Sus	A	F	EBA	16J	16J	3.0	0	0	0.	0.	0	$16,233
1595	FT III - Vacant,	A	S	CAA	11A	11A	1.0	15	6	50.	0.	0	$8,091
1825	FT III - Phillips, Kim	P	S	CAA	11F	11F	1.0	0	0	50.	0.	0	$6,060
1843	FT III - Rudge, Kimber	P	S	CAA	11F	11J	1.0	0	0	50.	0.	0	$6,301
1857	FB III - Watson, Lesli	P	F	CAA	18F	18J	12.0	5	2	0.	0.	0	$79,337
1967	FB I - Hobart, Kathy	A	S	BKB	14C	14C	1.0	22	8	0.	0.	0	$11,334
Personnel Totals =							30.0	17,022			$5,247		$200,529

PROJECT LINE ITEM DETAIL

LINE#	DESCRIPTION	Thousand $$$ AMOUNT	COMMENT
72240	Field Travel	10.7	Travel
72500	Per Diem	4.6	Per Diem expenses
73000	TOTAL CONTRACTUAL	25.5	PIT Tags
73000	TOTAL CONTRACTUAL	0.5	Photo Processing
73000	TOTAL CONTRACTUAL	2.5	Printing
73000	TOTAL CONTRACTUAL	1.0	Freight and Postage
73000	TOTAL CONTRACTUAL	8.3	PIT Tag R&D
73000	TOTAL CONTRACTUAL	2.0	Truck Rental in Dutch
73000	TOTAL CONTRACTUAL	1.0	Photo & Printing (Dutch Hrb)
73000	TOTAL CONTRACTUAL	1.0	Freight & Postage (Dutch Hrb)
73000	TOTAL CONTRACTUAL	35.0	Infopet Image Process (Donald)
73000	TOTAL CONTRACTUAL	88.5	Test Fishery Charter
73000	TOTAL CONTRACTUAL	57.5	Detector Equipment (Info Cont)
74480	Household & Institutional	1.0	Groceries
74520	Professional & Scientific	2.0	Misc. Scientific Equip.
74600	Other Operating Supplies	1.0	Gloves, hardware, etc.
74600	Other Operating Supplies	3.0	Tag Rewards
74600	Other Operating Supplies	2.0	Misc. Expendibles (Dutch Hrb)
75690	TOTAL EQUIPMENT & MACHINERY	7.0	Misc. Computer
	TOTAL LINES 200 - 700	254.1	
	TOTAL PROJECT COST	454.6	

Appendix **B.1.** Acceptance Criteria for the prototype Crab Identification System (CIS)

ADF&G will accept or reject each unit according to the sequential acceptance sampling procedure shown below. Rejection-acceptance criteria are based on a sequential probability ratio test (Burr 1976) set to have:

1. A 0.05 probability of accepting a unit with a detection rate of $\leq$ 90%;
2. A 0.05 probability of rejecting a unit with a detection rate of > 95%.

The acceptance sampling procedure leading to acceptance or rejection will be performed only once. The vendor may, of course, perform preliminary test procedures at its own expense to assure itself of the proper functioning of each unit if so desired.

Acceptance trial procedures will be identical for each unit. The conveyor CIS will be tested first, followed by the waste tank CIS. In the acceptance sampling procedure, each trial consists of a transponder-injected red king crab tail section passing the antenna assembly. An ADF&G employee will inject a red king crab tail section with the transponder and, in the testing of the conveyor CIS, toss the tail section onto the primary product conveyor leading to the packing conveyor. Tagged tail sections used in the conveyor CIS trials will be re-used for the waste tank CIS trials; an ADF&G employee will toss the tail section into the waste trough at the last butcher station. A hand held reader will be used to check for the functionality of the transponder and to record the transponder's ID code prior to tossing the tail section onto either the primary processing conveyor or the waste trough at the last butcher station; if the transponder is not functioning correctly (e.g., cannot be detected by the hand held reader) it will not be used for a trial. A different transponder will be used for each trial. Except for unavailability, a different tail section will be used for each trial.

Timing between each trial will be determined by ADF&G and will be constrained only by the 48 hour limit to accept or reject the unit after notification of readiness by the vendor. A "failure" in the acceptance sampling procedure occurs when the scanner antenna assembly fails to detect the transponder (as indicated by the assembly's external visual indicator) or if it fails to store the transponder's correct ID code in the assembly's memory or if it fails to correctly upload the stored transponder ID code to a portable computer supplied by ADF&G.

Appendix **B.2.** Rules for accepting or rejecting the prototype Crab Identification System during testing at Alyeska Seafoods November 1994.

Range of Number of Trials	Accept System if Number of Failures Equals:	Reject System if Number of Failures Equals:
1-4	*	*
5-14	*	5
15-28	*	6
29-42	*	7
43-54	*	8
55-56	0	8
57-68	0	9
69	1	9
70-82	1	10
83	2	10
84-95	2	11
96-97	3	11
98-109	3	12
110-111	4	12
112-123	4	13
124-125	5	13
126-137	5	14
138-139	6	14
104-151	6	15
152-165	7	16
166	8	16
167-178	8	17
179-180	9	17
181-192	9	18
193-194	10	18
195-206	10	19
207-208	11	19
209-220	11	20
221	12	20
222-234	12	21
235	13	21
236-247	13	22
248-249	14	22
250-261	14	23
262-263	15	23

Appendix C.1. Location of the 162 survey stations in the 1994 Bristol Bay red king crab test fishery survey. Stations are ordered by **block** number; latitude and longitude locations denote the **eastern-most** pot of each four pot station.

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
1	118	57	2.50	161	24.21
1	117	57	2.50	161	33.33
1	116	57	2.50	161	42.45
1	136	56	57.50	161	43.15
1	137	56	57.50	161	34.11
1	138	56	57.50	161	25.07
1	158	56	52.50	161	25.07
1	157	56	52.50	161	34.11
1	156	56	52.50	161	43.15
2	176	56	47.50	161	43.15
2	177	56	47.50	161	34.11
2	178	56	47.50	161	25.07
2	198	56	42.50	161	25.07
2	197	56	42.50	161	34.11
2	196	56	42.50	161	43.15
2	216	56	37.50	161	43.15
2	217	56	37.50	161	34.11
2	218	56	37.50	161	25.07
3	238	56	32.50	161	25.07
3	237	56	32.50	161	34.11
3	236	56	32.50	161	43.15
3	256	56	27.50	161	43.85
3	257	56	27.50	161	34.89
3	258	56	27.50	161	25.93
3	278	56	22.50	161	25.93
3	277	56	22.50	161	34.89
3	276	56	22.50	161	43.85
4	275	56	22.50	161	52.81
4	274	56	22.50	162	1.77
4	273	56	22.50	162	10.73
4	253	56	27.50	162	10.73
4	254	56	27.50	162	1.77
4	255	56	27.50	161	52.81
4	235	56	32.50	161	52.19
4	234	56	32.50	162	1.23
4	233	56	32.50	162	10.27
5	213	56	37.50	162	10.27
5	214	56	37.50	162	1.23
5	215	56	37.50	161	52.19
5	195	56	42.50	161	52.19
5	194	56	42.50	162	1.23
5	193	56	42.50	162	10.27
5	173	56	47.50	162	10.27
5	174	56	47.50	162	1.23
5	175	56	47.50	161	52.19

Appendix C.1. (page 2 of 4)

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
6	155	56	52.50	161	52.19
6	154	56	52.50	162	1.23
6	153	56	52.50	162	10.27
6	133	56	57.50	162	10.27
6	134	56	57.50	162	1.23
6	135	56	57.50	161	52.19
6	115	57	2.50	161	51.58
6	114	57	2.50	162	0.70
6	113	57	2.50	162	9.82
7	112	57	2.50	162	18.95
7	111	57	2.50	162	28.07
7	110	57	2.50	162	37.19
7	130	56	57.50	162	37.40
7	131	56	57.50	162	28.36
7	132	56	57.50	162	19.32
7	152	56	52.50	162	19.32
7	151	56	52.50	162	28.36
7	150	56	52.50	162	37.40
8	170	56	47.50	162	37.40
8	171	56	47.50	162	28.36
8	172	56	47.50	162	19.32
8	192	56	42.50	162	19.32
8	191	56	42.50	162	28.36
8	190	56	42.50	162	37.40
8	210	56	37.50	162	37.40
8	211	56	37.50	162	28.36
8	212	56	37.50	162	19.32
9	232	56	32.50	162	19.32
9	231	56	32.50	162	28.36
9	230	56	32.50	162	37.40
9	250	56	27.50	162	37.60
9	251	56	27.50	162	28.64
9	252	56	27.50	162	19.68
9	272	56	22.50	162	19.68
9	271	56	22.50	162	28.64
9	270	56	22.50	162	37.60
10	269	56	22.50	162	46.56
10	268	56	22.50	162	55.52
10	267	56	22.50	163	4.48
10	247	56	27.50	163	4.48
10	248	56	27.50	162	55.52
10	249	56	27.50	162	46.56
10	229	56	32.50	162	46.44
10	228	56	32.50	162	55.48
10	227	56	32.50	163	4.52

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
11	207	56	37.50	163	4.52
11	208	56	37.50	162	55.48
11	209	56	37.50	162	46.44
11	189	56	42.50	162	46.44
11	188	56	42.50	162	55.48
11	187	56	42.50	163	4.52
11	167	56	47.50	163	4.52
11	168	56	47.50	162	55.48
11	169	56	47.50	162	46.44
12	149	56	52.50	162	46.44
12	148	56	52.50	162	55.48
12	147	56	52.50	163	4.52
12	127	56	57.50	163	4.52
12	128	56	57.50	162	55.48
12	129	56	57.50	162	46.44
12	109	57	2.50	162	46.32
12	108	57	2.50	162	55.44
12	107	57	2.50	163	4.56
13	106	57	2.50	163	13.68
13	105	57	2.50	163	22.81
13	104	57	2.50	163	31.93
13	124	56	57.50	163	31.64
13	125	56	57.50	163	22.60
13	126	56	57.50	163	13.56
13	146	56	52.50	163	13.56
13	145	56	52.50	163	22.60
13	144	56	52.50	163	31.64
14	164	56	47.50	163	31.64
14	165	56	47.50	163	22.60
14	166	56	47.50	163	13.56
14	186	56	42.50	163	13.56
14	185	56	42.50	163	22.60
14	184	56	42.50	163	31.64
14	204	56	37.50	163	31.64
14	205	56	37.50	163	22.60
14	206	56	37.50	163	13.56
15	226	56	32.50	163	13.56
15	225	56	32.50	163	22.60
15	224	56	32.50	163	31.64
15	244	56	27.50	163	31.36
15	245	56	27.50	163	22.40
15	246	56	27.50	163	13.44
15	266	56	22.50	163	13.44
15	265	56	22.50	163	22.40
15	264	56	22.50	163	31.36

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
16	263	56	22.50	163	40.32
16	262	56	22.50	163	49.27
16	261	56	22.50	163	58.23
16	241	56	27.50	163	58.23
16	242	56	27.50	163	49.27
16	243	56	27.50	163	40.32
16	223	56	32.50	163	40.68
16	222	56	32.50	163	49.73
16	221	56	32.50	163	58.77
17	201	56	37.50	163	58.77
17	202	56	37.50	163	49.73
17	203	56	37.50	163	40.68
17	183	56	42.50	163	40.68
17	182	56	42.50	163	49.73
17	181	56	42.50	163	58.77
17	161	56	47.50	163	58.77
17	162	56	47.50	163	49.73
17	163	56	47.50	163	40.68
18	143	56	52.50	163	40.68
18	142	56	52.50	163	49.73
18	141	56	52.50	163	58.77
18	121	56	57.50	163	58.77
18	122	56	57.50	163	49.73
18	123	56	57.50	163	40.68
18	103	57	2.50	163	41.05
18	102	57	2.50	163	50.18
18	101	57	2.50	163	59.30

Appendix C.2. Location of the 162 survey stations in the 1994 Bristol Bay red king crab test fishery survey. Stations are ordered by **station** number; latitude and longitude locations denote the **eastern-most** pot of each four pot station.

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
18	101	57	2.50	163	59.30
18	102	57	2.50	163	50.18
18	103	57	2.50	163	41.05
13	104	57	2.50	163	31.93
13	105	57	2.50	163	22.81
13	106	57	2.50	163	13.68
12	107	57	2.50	163	4.56
12	108	57	2.50	162	55.44
12	109	57	2.50	162	46.32
7	110	57	2.50	162	37.19
7	111	57	2.50	162	28.07
7	112	57	2.50	162	18.95
6	113	57	2.50	162	9.82
6	114	57	2.50	162	0.70
6	115	57	2.50	161	51.58
1	116	57	2.50	161	42.45
1	117	57	2.50	161	33.33
1	118	57	2.50	161	24.21
18	121	56	57.50	163	58.77
18	122	56	57.50	163	49.73
18	123	56	57.50	163	40.68
13	124	56	57.50	163	31.64
13	125	56	57.50	163	22.60
13	126	56	57.50	163	13.56
12	127	56	57.50	163	4.52
12	128	56	57.50	162	55.48
12	129	56	57.50	162	46.44
7	130	56	57.50	162	37.40
7	131	56	57.50	162	28.36
7	132	56	57.50	162	19.32
6	133	56	57.50	162	10.27
6	134	56	57.50	162	1.23
6	135	56	57.50	161	52.19
1	136	56	57.50	161	43.15
1	137	56	57.50	161	34.11
1	138	56	57.50	161	25.07
18	141	56	52.50	163	58.77
18	142	56	52.50	163	49.73
18	143	56	52.50	163	40.68
13	144	56	52.50	163	31.64
13	145	56	52.50	163	22.60
13	146	56	52.50	163	13.56
12	147	56	52.50	163	4.52
12	148	56	52.50	162	55.48
12	149	56	52.50	162	46.44

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
7	150	56	52.50	162	37.40
7	151	56	52.50	162	28.36
7	152	56	52.50	162	19.32
6	153	56	52.50	162	10.27
6	154	56	52.50	162	1.23
6	155	56	52.50	161	52.19
1	156	56	52.50	161	43.15
1	157	56	52.50	161	34.11
1	158	56	52.50	161	25.07
17	161	56	47.50	163	58.77
17	162	56	47.50	163	49.73
17	163	56	47.50	163	40.68
14	164	56	47.50	163	31.64
14	165	56	47.50	163	22.60
14	166	56	47.50	163	13.56
11	167	56	47.50	163	4.52
11	168	56	47.50	162	55.48
11	169	56	47.50	162	46.44
8	170	56	47.50	162	37.40
8	171	56	47.50	162	28.36
8	172	56	47.50	162	19.32
5	173	56	47.50	162	10.27
5	174	56	47.50	162	1.23
5	175	56	47.50	161	52.19
2	176	56	47.50	161	43.15
2	177	56	47.50	161	34.11
2	178	56	47.50	161	25.07
17	181	56	42.50	163	58.77
17	182	56	42.50	163	49.73
17	183	56	42.50	163	40.68
14	184	56	42.50	163	31.64
14	185	56	42.50	163	22.60
14	186	56	42.50	163	13.56
11	187	56	42.50	163	4.52
11	188	56	42.50	162	55.48
11	189	56	42.50	162	46.44
8	190	56	42.50	162	37.40
8	191	56	42.50	162	28.36
8	192	56	42.50	162	19.32
5	193	56	42.50	162	10.27
5	194	56	42.50	162	1.23
5	195	56	42.50	161	52.19
2	196	56	42.50	161	43.15
2	197	56	42.50	161	34.11
2	198	56	42.50	161	25.07

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
17	201	56	37.50	163	58.77
17	202	56	37.50	163	49.73
17	203	56	37.50	163	40.68
14	204	56	37.50	163	31.64
14	205	56	37.50	163	22.60
14	206	56	37.50	163	13.56
11	207	56	37.50	163	4.52
11	208	56	37.50	162	55.48
11	209	56	37.50	162	46.44
8	210	56	37.50	162	37.40
8	211	56	37.50	162	28.36
8	212	56	37.50	162	19.32
5	213	56	37.50	162	10.27
5	214	56	37.50	162	1.23
5	215	56	37.50	161	52.19
2	216	56	37.50	161	43.15
2	217	56	37.50	161	34.11
2	218	56	37.50	161	25.07
16	221	56	32.50	163	58.77
16	222	56	32.50	163	49.73
16	223	56	32.50	163	40.68
15	224	56	32.50	163	31.64
15	225	56	32.50	163	22.60
15	226	56	32.50	163	13.56
10	227	56	32.50	163	4.52
10	228	56	32.50	162	55.48
10	229	56	32.50	162	46.44
9	230	56	32.50	162	37.40
9	231	56	32.50	162	28.36
9	232	56	32.50	162	19.32
4	233	56	32.50	162	10.27
4	234	56	32.50	162	1.23
4	235	56	32.50	161	52.19
3	236	56	32.50	161	43.15
3	237	56	32.50	161	34.11
3	238	56	32.50	161	25.07
16	241	56	27.50	163	58.23
16	242	56	27.50	163	49.27
16	243	56	27.50	163	40.32
15	244	56	27.50	163	31.36
15	245	56	27.50	163	22.40
15	246	56	27.50	163	13.44
10	247	56	27.50	163	4.48
10	248	56	27.50	162	55.52
10	249	56	27.50	162	46.56

BLOCK	STATION	LATITUDE DEGREES	LATITUDE MINUTES	LONGITUDE DEGREES	LONGITUDE MINUTES
9	250	56	27.50	162	37.60
9	251	56	27.50	162	28.64
9	252	56	27.50	162	19.68
4	253	56	27.50	162	10.73
4	254	56	27.50	162	1.77
4	255	56	27.50	161	52.81
3	256	56	27.50	161	43.85
3	257	56	27.50	161	34.89
3	258	56	27.50	161	25.93
16	261	56	22.50	163	58.23
16	262	56	22.50	163	49.27
16	263	56	22.50	163	40.32
15	264	56	22.50	163	31.36
15	265	56	22.50	163	22.40
15	266	56	22.50	163	13.44
10	267	56	22.50	163	4.48
10	268	56	22.50	162	55.52
10	269	56	22.50	162	46.56
9	270	56	22.50	162	37.60
9	271	56	22.50	162	28.64
9	272	56	22.50	162	19.68
4	273	56	22.50	162	10.73
4	274	56	22.50	162	1.77
4	275	56	22.50	161	52.81
3	276	56	22.50	161	43.85
3	277	56	22.50	161	34.89
3	278	56	22.50	161	25.93

Appendix D.1. Legal male red king crab tally form.

ADF&G LEGAL MALE RED KING CRAB TALLY

DATE	POT#	#LEGAL CRAB≥6.5"	DATE	POT#	#LEGAL CRAB ≥6.5"

Appendix D.2. Male crab data form.

ADF&G MALE CRAB

SPECIES _____ STATION NUMBER _____ MEASURER _____

SEX _____ BUOY NUMBER _____ RECORDER _____

VESSEL KRISTEN GAIL SAMPLING FACTOR ___/___

DATE ___/___/___ PAGE _____ OF _____

	SEQUENTIAL POT NUMBER	SPECIES	SEX	SIZE (mm CL)	LEGAL	SHELL AGE	OTHER	COMMENTS
1			1					
2			1					
3			1					
4			1					
5			1					
6			1					
7			1					
8			1					
9			1					
10			1					
11			1					
12			1					
13			1					
14			1					
15			1					
16			1					
17			1					
18			1					
19			1					
20			1					
21			1					
22			1					
23			1					
24			1					
25			1					
26			1					
27			1					
28			1					
29			1					
30			1					

CRAB SPECIES

1 - L. aequisonia
2 - P. camtschaticus
3 - P. platypus
4 - Enmacrus
5 - C. bairdi x opilio
6 - C. bairdi
7 - C. opilio
8 - C. angulatus
9 - Cancer magister
A - L. couesi
D - C. tannen

SEX

1 - Male
2 - Female

LEGAL

1 - Sublegal
2 - Legal

SHELL AGE

0 - Soft
1 - New
2 - Old
3 - Very Old

OTHER

1 - Dead
7 - Cottage cheese disease
8 - Shell rust
9 - Cracked carapace/rostrum
10 - Injured legs

FILE: MALE.FRP 8/94

Appendix D.3. Female crab data form.

ADF&G FEMALE CRAB FORM

SPECIES _____ STATION NUMBER _____ MEASURER _____

SEX _____ BUOY NUMBER _____ RECORDER _____

VESSEL KRISTEN GAIL SAMPLING FACTOR ___/___

DATE ___/___/___ EGGS PAGE _____ OF _____

	SEQUENTIAL POT NUMBER	SPECIES	SEX	SIZE (mm-CL)	LEGAL	SHELL AGE	COLOR	DEVELOP	CONDITION	% CLUTCH	OTHER	COMMENTS
1			2									
2			2									
3			2									
4			2									
5			2									
6			2									
7			2									
8			2									
9			2									
10			2									
11			2									
12			2									
13			2									
14			2									
15			2									
16			2									
17			2									
18			2									
19			2									
20			2									
21			2									
22			2									
23			2									
24			2									
25			2									
26			2									
27			2									
28			2									
29			2									
30			2									

CRAB SPECIES
1 - L. aedusonia
2 - P. camschaticus
3 - P. platypus
4 - Erimacrus
5 - C. bairdi x opilio
6 - C. bairdi
7 - C. opilio
8 - C. angulatus
9 - Cancer magister

A - L. couesi
0 - C. tanneri

SEX
1 - Male
2 - Female

FEMALES
3 - Juvenile
4 - Adult

SHELL AGE
0 - Soft
1 - New
2 - Old
3 - Very Old

LIVE EGG COLOR
1 - Tan
2 - Purple
3 - Brown
4 - Orange
5 - Purple-brown
6 - Pink
7 - Reddish
0 - Other, describe in comments

EGG DEVEL.
1 - Uneyed
2 - Eyed

CLUTCH COND.
1 - Dead eggs not apparent
2 - Dead eggs <20%
3 - Dead eggs >20%

PERCENT CLUTCH
1 - Barren, clean pleopods
2 - Barren, with empty egg cases and/or stalks
3 - Clutch 1-29% full
4 - Clutch 30-59% full
5 - Clutch 60-89% full
6 - Clutch 90-100% full

OTHER
1 - Dead
7 - Cottage cheese disease
8 - Shell rust
9 - Cracked carapace/rostrum
10 - Injured legs

Appendix D.4. Crab research data form.

ADF&G RESEARCH CRAB FORM

SPECIES _____ STATION NUMBER _____ MEASURER _____

SEX _____ BUOY NUMBER _____ RECORDER _____

VESSEL KRISTEN GAIL SAMPLING FACTOR /

DATE _____ EGGS PAGE _____ OF _____

	SEQUENTIAL POT NUMBER	SPECIES	SEX	SIZE (mm CL)	LEGAL	SHELL AGE	COLOR	DEVELOP	CONDITION	% CLUTCH	OTHER	COMMENTS
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												

CRAB SPECIES

1 - L. aequispina
2 - P. camtschaticus
3 - P. platypus
4 - Erimacrus
5 - C. bairdi x opilio
6 - C. bairdi
7 - C. opilio
8 - C. angulatus
9 - Cancer magister
A - L. couesi
D - C. tanneri

SEX

1 - Male
2 - Female

SHELL AGE

0 - Soft
1 - New
2 - Old
3 - Very Old

LEGAL

MALES	FEMALES
1 - Sublegal	3 - Juvenile
2 - Legal	4 - Adult

LIVE EGG COLOR

1 - Tan
2 - Purple
3 - Brown
4 - Orange
5 - Purple-brown
6 - Pink
7 - Reddish
8 -
9 -
0 - Other, describe in comments

EGG DEVEL.

1 - Uneyed
2 - Eyed

CLUTCH COND.

1 - Dead eggs not apparent
2 - Dead eggs <20%
3 - Dead eggs >20%

PERCENT CLUTCH

1 - Barren, clean pleopods
2 - Barren, with empty egg cases and/or stalks
3 - Clutch 1-29% full
4 - Clutch 30-59% full
5 - Clutch 60-89% full
6 - Clutch 90-100% full

OTHER

1 - Dead
7 - Cottage cheese disease
8 - Shell rust
9 - Cracked carapce/ rostrum
10 - Injured legs

FILE: FEMALE.FRP 8/94

1994 PILOT HOUSE LOG - SURVEY STATIONS

SURVEY VESSEL: FV Kristen Gail

BRISTOL BAY RED KING CRAB

PAGE ____ OF ____

CAPTAIN: Brian Walker

SET GEAR			DEPTH	BOT.	SEQUENTIAL	BOUY	LIFT GEAR			N. LATITUDE		W. LONGITUDE		COST RECOVERY
MONTH	DAY	MILITARY TIME	(FMS)	TYPE	POT NUMBER	NO.	MONTH	DAY	MILITARY TIME	DEGREE	MINUTES	DEGREES	MINUTES	CRABS > 6 INCH.
STATION														
STATION														
STATION														
STATION														

Bottom Type Codes: 1 - Rock; 2 - Sand; 3 - Silt; 4 - Mud.

logsta94.wq1

Appendix D.5. Pilot house log form, survey stations.

SURVEY VESSEL: FV Kristen Gall
CAPTAIN: Brian Walker

1994 PILOT HOUSE LOG - COST RECOVERY STRINGS

BRISTOL BAY RED KING CRAB

PAGE ____ OF ____

STRING NO. | | | | |

SET GEAR			DEPTH	BOT.	SEQUENTIAL	BOUY	LIFT GEAR			N. LATITUDE		W. LONGITUDE		COST RECOVERY
MONTH	DAY	MILITARY TIME	(FMS)	TYPE	POT NUMBER	NO.	MONTH	DAY	MILITARY TIME	DEGREE	MINUTES	DEGREES	MINUTES	CRABS > 6 INCH.
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Bottom Type Codes: 1 - Rock; 2 - Sand; 3 - Silt; 4 - Mud.

logsta94.wq1

Appendix D.6. Pilot house log form, cost recovery strings.

Crab Identification System (CIS)
and
Crab Electronic Identification System (CEIS)
Refurbishment
Proposal

6/13/94

Prepared by
InfoPet Identification Systems, Inc.
415 West Travelers Trail
Burnsville, MN 55337

Crab Identification System (CIS)

InfoPet Identification Systems, Inc. is pleased to provide this proposal to the State of Alaska Department of Fish and Game (ADF&G) for an advanced Crab Identification System (CIS) for the detection of marine species (e.g., crab) that have been implanted or tagged with a Trovan passive integrated transponder (PIT) tag. This system will provide a number of advantages over the previously used system by: 1) Reduced complexity, 2) Ease of facility installation and removal, 3) Multiplicity of installation location selections, and 4) Lower cost. The accompanying document entitled Crab Identification System (CIS) Specification describes system requirements.

InfoPet has continued to make advancements in system architectures and antenna design. These advancements are allowing the users of the Trovan PIT tag technology to implement identification techniques into their research efforts and operations with greater ease and confidence, at a lower cost, with improved reliability.

CIS Architecture

The CIS is divided into three primary sections: the Data Processing Unit (DPU), the Interrogation/Control Unit (I/CU) and the Antenna (see Figure 1). The DPU is only connected to the I/CU during CIS initialization and data retrieval. The I/CU and Antenna perform the primary functions of interrogation, PIT tag detection, and information storage independent of the DPU.

The DPU, which for this proposal is assumed to be furnished by ADF&G, will be a standard "IBM compatible" notebook or laptop personal computer. It will be used to initialize the CIS and can be used to synchronize multiple CIS's in a single facility by setting the date and time and clearing the data storage area of the I/CU. It will be used to retrieve the PIT tag detection data that has been temporarily stored in the I/CU. It will also be used to perform any necessary analysis and data correlation on the PIT tag information. InfoPet will develop the DPU software for initialization and information & data retrieval. We will use a standard, off-the-shelf data base manager or spread sheet software, as desired by ADF&G, as the data analysis and correlation tool.

The I/CU will be a waterproof enclosure containing the AC to DC power conversion for the system along with the Trovan reader and interrogation electronics. The electronics will be the standard, proven Trovan reader electronics with modified microprocessor software allowing for constant excitation of the antenna for PIT tag detection. InfoPet has provided reader electronics and software of this type for numerous animal control and zoo research applications. Once a PIT tag is energized by the I/CU and antenna, the antenna will send the PIT tag information to the I/CU for interpretation, verification, and

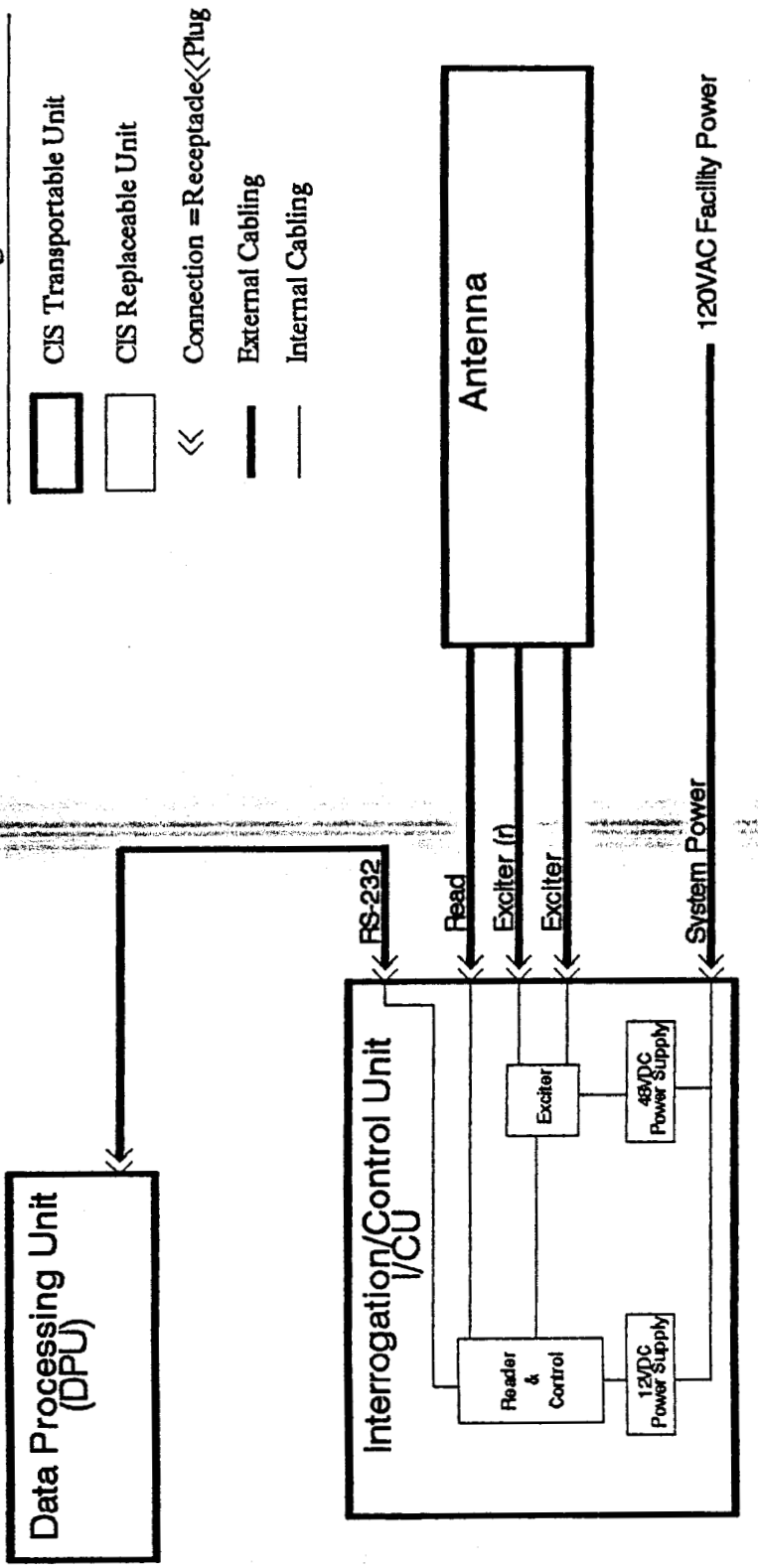


Figure 1
Crab Identification System Block Diagram and Interconnect

data storage until DPU retrieval. The I/CU will be able to store the date, time, and hexadecimal number for at least 2,000 PIT tag detections.

The I/CU will also show the system operator the status of the system operation through the use of a visible indicator display and indicator lights. The liquid crystal display will provide the operator with indications of system functions and the PIT tag number when detected. The indicator lights will display whether the I/CU is interrogating or not and whether it has detected a PIT tag.

To verify proper system operation, the I/CU software will be preloaded with a number of test PIT tag numbers. When detected by the antenna, a test PIT tag will be displayed on the liquid crystal display as a "TEST PIT TAG" with its appropriate hexadecimal number. This test number will not be stored in the I/CU's memory.

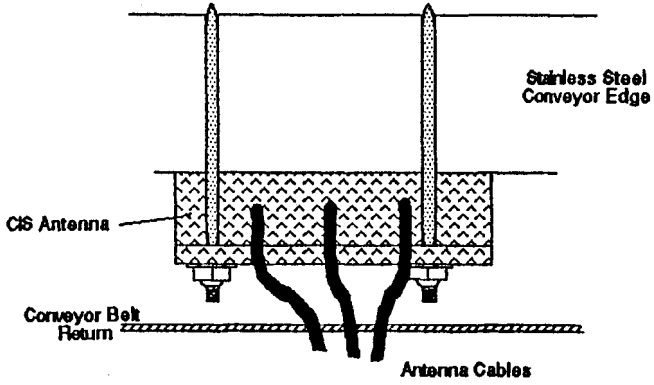
The antenna will be placed under the rubber conveyor belt at Alyeska Seafoods in Dutch Harbor and, as the butchered seafood passes over the antenna toward the packing stations, any PIT tag will be interrogated and detected. If a specific facility's seafood handling process does not have the seafood body part, with the potentially implanted transponder, as part of the seafood to be packaged, the antenna can be mounted in the path of the waste material. If the ADF&G desires, a CIS could be placed at "both ends of the seafood handling process" to detect PIT tags that have the potential of passing either direction.

CIS Construction

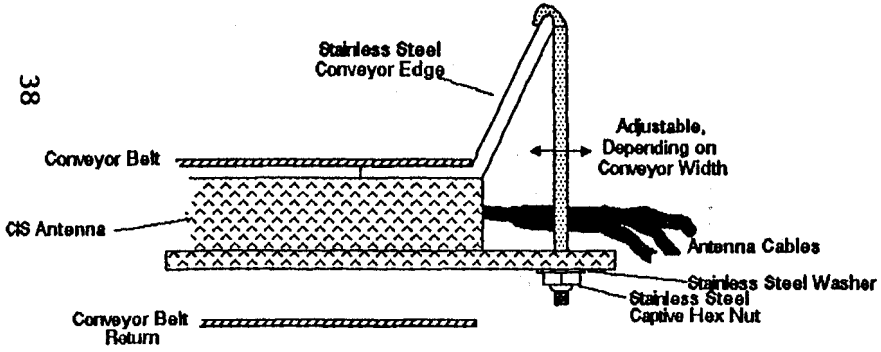
The CIS will be designed and constructed using standard, available, and proven materials and components that have been designed to operate in the harsh environment of a seafood processing facility or are protected from that environment. The three primary CIS units will be separate, transportable units, interconnected with the necessary cables. All cables and connectors will be designed and constructed for the marine (salt water) environment of the facility. The DPU will only be exposed to the processing area's environment for brief periods of time and will have to be protected from any water spray, but the inherent ruggedness of today's state-of-the-art notebook personal computers will provide the necessary protection from the environment. InfoPet has used this style of computer in beef butchering facilities, zoo, and other non-office environments with success.

CIS Installation

The modular CIS will be designed to be installed quickly and easily. Only the antenna will require any "hard mounting", but it will be constructed in such a manner that no drilling of holes or modification of existing plant facilities will be necessary (see Figure 2). The I/CU will be set on the floor of the processing facility under the antenna location, away from any traffic patterns or walkways. The DPU will be placed in an office space until required for CIS initialization or data retrieval.

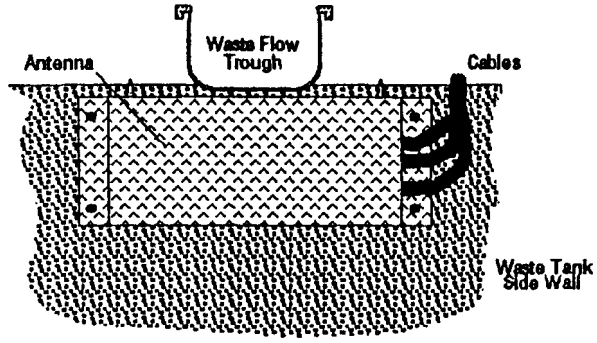


Conveyor Side View

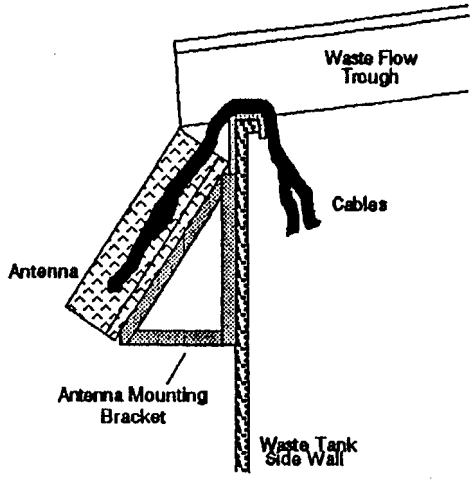


Conveyor Cross Sectional View

Conveyor Mounting



Waste Tank, Inside Facing View



Waste Tank Side Cutaway View

Waste Tank Mounting

Figure 2
Crab Identification System Antenna Mounting Methods
(Representative View, Not to Scale)

ADFGFIG2.GEM 6/13/94

If ADF&G anticipates the need to mount an antenna in the waste path, such as under the waste trough in the grinder tank at the Alyeska Seafoods facility, a mounting bracket would be constructed to hold the antenna in position.

A 120VAC, 10 amp, grounded circuit will be necessary to connect the CIS to the facility's power. That will be the only requirement for power other than a standard office receptacle of the DPU's AC/DC power source/battery charger.

CIS Operation

Once the I/CU and antenna have been installed and power applied, the DPU will be connected to initialize the system by providing the correct date and time from the DPU's internal clock. This function will allow the synchronization of multiple I/CU's if ADF&G desire more than one system in a facility. After the initialization process is complete and the DPU disconnected, the I/CU will start the interrogation/detection process as verified by the proper indicator light indications. It will continue this process until terminated by either a data retrieval operation or power termination.

To verify proper system operation, the test PIT tag(s) should be used to ensure that the I/CU and antenna are operating properly. The operator will see on the I/CU display the proper information indicating that a PIT tag test has occurred. This can be performed as often as the system operator desires to instill confidence that the CIS is operating as designed.

During a data retrieval operation, the DPU will upload all of the PIT tag detection information from the I/CU's temporary data storage area. After this upload has occurred, the I/CU's temporary data storage area will be reset and cleared to allow for new information to be recorded. During the upload operation the I/CU will not be able to be interrogating for PIT tags, so the retrieval operation should be conducted during the processing line's break or down times to preclude the missing of any PIT tags. This retrieval operation will only take approximately one minute to accomplish. After the data retrieval has been completed and the DPU disconnected, the I/CU will restart the interrogation and detection process.

Once the detection data has been retrieved and placed into the desired data base area of the DPU, the ADF&G designated software can manipulate, analyze, and correlate the data in any manner desired.

Crab Electronic Identification System (CEIS) Refurbishment

InfoPet has performed the analysis of the effort required to ready the original CEIS for reinstallation at the Westward Seafoods processing facility in Dutch Harbor, AK. No

major changes would occur other than a general equipment cleanup, replacement of faulty components, and an assessment of the water-proofing approach originally taken with the electronics enclosure. After the analysis, it appears that the readers and antennas are functioning satisfactorily and will not require replacement, so any potential cost for these items was not included in this proposal. If further analysis, testing, and verification indicate that this is necessary, ADF&G will be informed of the additional cost and provide their approval prior to completing the repair. InfoPet will also change the power source for the CEIS from a 12VDC battery source to a 120VAC source. The AC to DC power supply will be housed in a waterproof case.

CIS and CEIS Schedule

The efforts to develop, fabricate, test and verify the CIS and to refurbish the CEIS will require 12 weeks from contract award.

InfoPet Identification Systems, Inc.
415 West Travelers Trail
Burnsville, MN 55337
612-890-2080 (Tel) 612-890-2054 (Fax)

Crab Identification System (CIS) Specification

6/13/94

Prepared by
InfoPet Identification Systems, Inc.
415 West Travelers Trail
Burnsville, MN 55337

Crab Identification System (CIS) Specification

1.0 General

This specification provides the functional, physical, electrical, operational, and installation requirements for a Crab Identification System, hereinafter referred to as CIS, which is to be used by the State of Alaska Department of Fish and Game for the detection of marine species (e.g., crab) that have been implanted or tagged with a Trovan passive integrated transponder (PIT) tag.

2.0 Operation

The CIS shall operate properly in a seafood processing facility for 24 hours a day operation without operator intervention and shall provide the ability to provide an operating status to an operator at the initiation of the operator. A period of 15 minutes per day to perform any scheduled or unscheduled maintenance will be provided.

2.1 CIS Initialization

After installation in the seafood processing facility, the appropriate power shall be applied to the CIS. Once power is stable, the Data Processing Unit (DPU) (e.g., laptop personal computer) shall be utilized to initialize the CIS Interrogation/Control Unit (I/CU). The DPU shall load the date, day, and time into the I/CU and start its operation. The DPU shall not be required to remain connected to the I/CU to maintain proper I/CU operation.

2.2 CIS Operation

The I/CU and the CIS antenna shall continually monitor the species primary processing flow and identify any occurrence of a PIT tag in the monitored flow to the specified detection rate. The I/CU shall maintain the data file history of each PIT tag detection. The history file shall contain the ten hexadecimal digit PIT tag identification number (12-3456-7890), the date (dd/mm/yy), and time (hh:mm:ss) for each PIT tag detection for at least 2,000 detections. The operator shall transfer this history file to the DPU, when facility operations allow, for further evaluation and analysis.

2.3 CIS Operating Verification

The I/CU shall provide a visual indication that it is operating. Indications shall be provided for both interrogations and PIT tag detections. A method shall be provided to

verify that the CIS has the ability to detect PIT tags, but this method shall not degrade or impact its normal operation or data file history.

3.0 Physical Characteristics

The CIS shall be designed with modularity and adaptability as part of its construction so that a system can be easily transported, installed, operated, and removed by a single individual with little or no impact to the facility processing the tagged species.

3.1 Construction

The complete CIS shall be modular in construction for ease of transportation, handling, and installation. The CIS shall be able to withstand commercial airline baggage and/or freight handling operations with no damage or degradation to its operation. The modularity of the CIS shall be separated into three major system components: 1) Data Processing, 2) Interrogation and Control, and 3) Antenna.

3.2 Weight

Each module of the CIS shall weigh less than 70 pounds when packed (if required) in its transport case.

3.3 Dimensions

No single unit or module of the CIS shall be greater than 110 inches when packed in its shipping container, if required, when its three dimensions (L + W + H) are added together.

3.3.1 Data Processing Unit (DPU)

The DPU shall be no larger than an off-the-shelf lap top or notebook personal computer and shall be supplied by the State of Alaska.

3.3.2 Interrogation/Control Unit (I/CU)

The I/CU shall be approximately 14 inches in length, 12 inches in width, and 12 inches in height.

3.3.3 Antenna

The Antenna module shall be approximately 26 inches in length, 16 inches in width, and 4 inches in height.

3.4 Environmental

The CIS shall be capable of operating in an Aleutian Islands seafood processing and packaging facility environment.

3.4.1 Temperature

The CIS shall be capable of operating in a temperature range of +32 degrees Fahrenheit to +100 degrees Fahrenheit.

3.4.2 Humidity

The I/CU and Antenna shall be capable of operating within a relative humidity range of 5 to 100 percent, condensing.

3.4.3 Shock

3.4.3.1 Transportation and Handling Shock

All system modules must be able to operate after withstanding air freight or commercial airline checked baggage handling procedures.

3.4.3.2 Operating Shock

All system modules must be able to operate after installation in the seafood processing facility. There will be minimum or no shocks to the system modules during operation.

3.4.4 Vibration

All system modules must be able to operate in the seafood processing environment of waste grinding and conveyor movements.

InfoPet Identification Systems, Inc.
415 West Travelers Trail
Burnsville, MN 55337
612-890-2080 (Tel) 612-890-2054 (Fax)

INFOPET

June 28, 1994

Ms. Leslie Watson
Alaska Dept. of Fish and Game
211 Mission Road
Kodiak, AK 99615

Dear Leslie,

The following is InfoPet Identification Systems' 90 day warranty for the Crab Identification System (CIS):

> InfoPet Identification Systems (InfoPet) warrants that the Crab Identification System (CIS) will be free from defects in materials and workmanship for a period of 90 consecutive calendar days, commencing with the date of system acceptance by the Alaska Department of Fish and Game (ADF&G) (such system acceptance to be in accordance with Section 5.0 of the Crab Identification System (CIS) Specification dated 6/13/94). This warranty does not cover damage due to external causes, including accident, problems with electrical power, usage not in accordance with the Crab Identification System (CIS) Specification dated 6/13/94, failure to perform any required preventive maintenance, abuse, and misuse.
>
> InfoPet will repair or replace the CIS when returned to InfoPet's facility in Burnsville, MN. During any period of time ADF&G has contracted with InfoPet for on-site engineering support, InfoPet will perform repairs on-site if at all possible. If InfoPet repairs or replaces any portion or all portions of the CIS, its warranty term is not extended beyond the original 90 days.

Please incorporate this warranty into InfoPet's Crab Identification System (CIS) and Crab Electronic Identification System (CEIS) Refurbishment Proposal dated 6/13/94.

Best regards,

Keith Myhre

Keith H. Myhre
Vice President, Business Development
InfoPet Identification Systems, Inc.

3.4.5 Electrical Interference and Susceptibility

All system modules must be able to operate in the seafood processing environment where high current electric motors are used to drive waste grinding and conveyor functions. A separate, grounded, AC power circuit shall be provided for the CIS.

3.4.6 Salt Water Exposure

3.4.6.1 I/CU

The I/CU shall be capable of operation when constantly exposed to ocean salt water, but not submerged in ocean salt water.

3.4.6.2 Antenna

The CIS Antenna shall be capable of operation when constantly exposed to ocean salt water, including fully submerged to a depth of not greater than six feet below the surface.

3.4.6.3 Salt Water Washdown

The I/CU and Antenna shall be capable of being subjected to an ocean salt water washdown and cleaning procedure while in operation.

4.0 Quality Assurance

Good industrial practices shall be maintained in the construction, fabrication, and testing of the CIS.

5.0 Test and Acceptance **SECTION 5.0 AMENDED-SEE NEXT PAGE**

The CIS shall achieve a 95% confidence interval on the detection rate for PIT tags implanted in the species during primary processing (butchering, gilling but prior to packing) operations. The Acceptance Sampling Table of the Alaska Department of Fish and Game Crab Electronic Identification System Customer Acceptance Criteria, Amended August 3, 1991 shall be used for final acceptance of the CIS.

InfoPet Identification Systems, Inc.
415 West Travelers Trail
Burnsville, MN 55337
612-890-2080 (Tel) 612-890-2054 (Fax)

June 28, 1994

Ms. Leslie Watson
Alaska Dept. of Fish and Game
211 Mission Road
Kodiak, AK 99615

Dear Leslie,

Please replace Section 5.0 Test and Acceptance of InfoPet's Crab Identification System (CIS) Specification dated 6/13/94 with the following updated Section 5.0:

5.0 Test and Acceptance

Final system acceptance of the CIS shall be conducted by the State of Alaska Department of Fish and Game in accordance with the procedures specified in the two page document entitled **Appendix F - Pre-Acceptance Trials for Each CIS Unit (6-16-94 memo from D. Pengilly to L. Watson).** Acceptance trial rejection-acceptance criteria shall be as specified in the **June 16, 1994 memorandum from Doug Pengilly to Leslie Watson regarding Acceptance Trials for Auto-Detectors.**

Best regards,

Keith H. Myhre
Vice President, Business Development
InfoPet Identification Systems, Inc.

Appendix F.1. Contract between the State of Alaska and the F/V KRISTEN GAIL.

INVITATION TO BID

INVITATION NUMBER
1097

RETURN THIS BID TO:
State of Alaska
Division of General Services
333 Willoughby Street
P.O. Box 110210
Juneau, Alaska 99811-0210

THIS IS NOT AN ORDER

DATE ITB ISSUED: 05/13/94

SEALED BIDS WILL BE RECEIVED IN SINGLE COPY AT THE ABOVE ADDRESS UNTIL 1:30 PM ON 06/03/94 AT WHICH TIME THEY WILL BE PUBLICLY OPENED.
DELIVERY LOCATION: SEE TEXT
DELIVERY DATE: SEE TEXT
FOB POINT: FINAL DESTINATION

**** IT IS NOT NECESSARY TO RETURN THIS FORM IF YOU DO NOT WISH TO BID ****

BID TITLE: CONTRACT FOR VESSEL CHARTER IN BRISTOL BAY AREA "T" FOR PURPOSES OF KING CRAB RESEARCH FOR THE DEPARTMENT OF FISH AND GAME

BIDDER'S NOTICE: By signature on this form, the bidders certify that; (1) the bidder has a valid Alaska business license and has written the license number below or has submitted one of the following forms of evidence of an Alaska business license with the bid: (a) a cancelled check for the business license fee; (b) a copy of a business license application with a receipt date stamp from the state's business license office; (c) a receipt from the state's business license office for the license fee; (d) a copy of the bidder's valid business license; (e) a sworn notarized affidavit that the bidder has applied and paid for a business license; (2) the price(s) submitted was arrived at independently and without collusion and that the bidder is complying with; (a) the laws of the State of Alaska; (b) the applicable portion of the Federal Civil Rights Act of 1964; (c) the Equal Employment Opportunity Act and the regulations issued thereunder by the state and Federal Government; and (d) all terms and conditions set out in this Invitation to Bid (ITB). If any bidder fails to comply with (1) or (2) of this paragraph, the state may reject the bid, terminate the contract, or consider the contractor in default.

Walt Harvey	COMPANY SUBMITTING BID	DOES YOUR BUSINESS QUALIFY FOR THE ALASKA BIDDER'S PREFERENCE? [ ] YES [ ] NO SEE ITB FOR EXPLANATION OF CRITERIA TO QUALIFY.
WALT HARVEY/ CONTRACTING OFFICER	AUTHORIZED SIGNATURE	
TELEPHONE NUMBER (907)465-2253	PRINTED NAME	
	DATE	VENDOR TAX I.D. #
PAGE 1 OF 16 PAGES REV 11/1/93	ALASKA BUSINESS LICENSE #	TELEPHONE #

INSTRUCTIONS TO BIDDERS:

1. INVITATION TO BID (ITB) REVIEW: Bidders shall carefully review this ITB for defects and questionable or objectionable material. Bidders' comments concerning defects and questionable or objectionable material in the ITB must be made in writing and received by the purchasing authority at least ten (10) days before the bid opening date. This will allow time for an amendment to be issued if one is required. It will also help prevent the opening of a defective bid, upon which award cannot be made, and the resultant exposure of bidders' prices. Bidders' original comments should be sent to the purchasing authority listed on the front of this ITB.

2. BID FORMS: Bidders shall use this and attached forms in submitting bids. A photocopied bid may be submitted.

3. SUBMITTING BIDS: Envelopes containing bids must be sealed, marked, and addressed as shown in the example below. Do not put the ITB number and opening date on the envelope of a request for bid information. Envelopes with ITB numbers annotated on the outside will not be opened until the scheduled date and time.

Bidder's Return Address

Department of Administration
Division of General Services
P.O. Box 110210
Juneau, AK 99811-0210

ITB No.:_____
Opening Date:_____

4. PRICES: The bidder shall state prices in the units of issue on this ITB. Prices quoted for commodities must be in U.S. funds and include applicable federal duty, brokerage fees, packaging, and transportation cost to the FOB point so that upon transfer of title the commodity can be utilized without further cost. Prices quoted for services must be quoted in U.S. funds and include applicable federal duty, brokerage fee, packaging, and transportation cost so that the services can be provided without further cost. Prices quoted in bids must be exclusive of federal, state, and local taxes. If the bidder believes that certain taxes are payable by the state, the bidder may list such taxes separately, directly below the bid price for the affected item. The state is exempt from Federal Excise Tax except the following:

Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
"Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;
Air Passenger - IRC, Section 4261 - on the purchase of passenger transportation services by air carriers.

5. VENDOR TAX ID NUMBER: If goods or services procured through this ITB are of a type that is required to be included on a Miscellaneous Tax Statement, as described in the Internal Revenue Code, a valid tax identification number must be provided to the State of Alaska before payment will be made.

6. FILING A PROTEST: A bidder may protest the award of a contract or the proposed award of a contract for supplies, services, or professional services. The protest must be filed in writing and include the following information: (1) the name, address, and telephone number of the protester; (2) the signature of the protester or the protester's representative; (3) identification of the contracting agency and the solicitation or contract at issue; (4) a detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and (5) the form of relief requested. Protests will be treated in accordance with Alaska Statutes (AS) 36.30.560-36.30.610.

CONDITIONS:

1. AUTHORITY: This ITB is written in accordance with AS 36.30 and 2 AAC 12.

2. COMPLIANCE: In the performance of a contract that results from this ITB, the contractor must comply with all applicable federal, state, and borough regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state, and borough taxes.

3. SUITABLE MATERIALS, ETC.: Unless otherwise specified, all materials, supplies or equipment offered by a bidder shall be new, unused, and of the latest edition, version, model or crop and of recent manufacture.

4. SPECIFICATIONS: Unless otherwise specified in the ITB, product brand names or model numbers specified in this ITB are examples of the type and quality of product required, and are not statements of preference. If the specifications describing an item conflict with a brand name or model number describing the item, the specifications govern. Reference to brand name or number does not preclude an offer of a comparable or better product, if full specifications and descriptive literature are provided for the product. Failure to provide such specifications and descriptive literature may be cause for rejection of the offer.

5. FIRM OFFER: For the purpose of award, offers made in accordance with this ITB must be good and firm for a period of ninety (90) days from the date of bid opening.

6. EXTENSION OF PRICES: In case of error in the extension of prices in the bid, the unit prices will govern; in a lot bid, the lot prices will govern.

7. BID PREPARATION COSTS: The state is not liable for any costs incurred by the bidder in bid preparation.

8. CONSOLIDATION OF AWARDS: Due to high administrative costs associated with processing of purchase orders, a single low bid of $50 or less may, at the discretion of the state, be awarded to the next low bidder receiving other awards for consolidation purposes. This paragraph is not subject to the protest terms enumerated in "INSTRUCTION" above.

9. CONTRACT FUNDING: Bidders are advised that funds are available for the initial purchase and/or the first term of the contract. Payment and performance obligations for succeeding purchases and/or additional terms of the contract are subject to the availability and appropriation of funds.

10. CONFLICT OF INTEREST: An officer or employee of the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if (1) the officer or employee is an employee of the administrative unit that supervises the award of this contract; or (2) the officer or employee has the power to take or withhold official action so as to affect the award or execution of the contract.

11. ASSIGNMENT(S): Assignment of rights and duties under a contract resulting from this ITB is not permitted unless authorized in writing by the State of Alaska, Department of Administration, Division of General Services.

12. SUBCONTRACTOR(S): Within five (5) working days of notice, the apparent low bidder must submit a list of the subcontractors that will be used in the performance of the contract. The list must include the name of each subcontractor and the location of the place of business for each subcontractor and evidence of each subcontractor's valid Alaska business license. Subcontractors can only be changed per AS 36.30.115 (b).

13. FORCE MAJEURE: (Impossibility to perform) The contractor is not liable for the consequences of any failure to perform, or default in performing, any of its obligations under this Agreement, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of and without the fault or negligence of the contractor. For the purposes of this Agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.

14. LATE BIDS: Late bids are bids received after the time and date set for receipt of the bids. Late bids will not be accepted.

15. CONTRACT EXTENSION: Unless otherwise provided in the ITB, the state and the successful bidder/contractor agree: (1) that any holding over of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions shall remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.

16. DEFAULT: In case of default by the contractor, for any reason whatsoever, the State of Alaska may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law or equity.

17. DISPUTES: Any dispute arising out of this agreement shall be resolved under the laws of Alaska. Any appeal of an administrative order or any original action to enforce any provision of this agreement or to obtain any relief from or remedy in connection with this agreement may be brought only in the superior court for the First Judicial District of Alaska.

18. CONSUMER ELECTRICAL PRODUCT: AS 45.45.910 requires that "a person may not sell, offer to sell, or otherwise transfer in the course of the person's business a consumer electrical product that is manufactured after August 14, 1990, unless the product is clearly marked as being listed by an approved third party certification program." Electrical consumer products manufactured before August 14, 1990 must either be clearly marked as being third party certified or be marked with a warning label that complies with AS 45.45.910(e). Even exempted electrical products must be marked with the warning label. By signature on this bid the bidder certifies that the product offered is in compliance with the law. A list of approved third party certifiers, warning labels and additional information is available from: Department of Labor, Labor Standards & Safety Division, Mechanical Inspection Section, P.O. Box 107020, Anchorage, Alaska 99510-7020, (907)269-4925.

SPECIAL CONDITIONS:

1. ORDER DOCUMENTS: Except as specifically allowed under this ITB, an ordering agency will not sign any vendor contract. The state is not bound by a vendor contract signed by a person who is not specifically authorized to sign for the state under this ITB. The State of Alaska Purchase Order, Contract Award and Delivery Order are the only order documents that may be used to place orders against the contract(s) resulting from this ITB.

2. BILLING INSTRUCTIONS: Invoices must be billed to the ordering agency's address shown on the individual Purchase Order, Contract Award or Delivery Order, not to the Division of General Services. The ordering agency will make payment after it receives the merchandise or service and the invoice. Questions concerning payment must be addressed to the ordering agency.

3. CONTINUING OBLIGATION OF CONTRACTOR: Notwithstanding the expiration date of a contract resulting from this ITB, the contractor is obligated to fulfill its responsibilities until warranty, guarantee, maintenance and parts availability requirements have completely expired.

PREFERENCES:

1. ALASKAN BIDDER'S PREFERENCE: Award will be made to the lowest responsive and responsible bidder after an Alaskan bidder's preference of five percent (5%) has been applied. The preference will be given to a person who: (1) holds a current Alaska business license; (2) submits a bid for goods or services under the name on the Alaska business license; (3) has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the bid; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship, and the proprietor is a resident of the state or is a partnership, and all partners are residents of the state; (5) if a joint venture, is composed entirely of venturers that qualify under (1) – (4) of this subsection. AS 36.30.170(b)

2. USE OF LOCAL FOREST PRODUCTS: In a project financed by state money in which the use of timber, lumber and manufactured lumber is required, only timber, lumber and manufactured lumber products originating in this state shall be used unless the use of those products has been determined to be impractical, in accordance with AS 36.15.010.

3. LOCAL AGRICULTURAL AND FISHERIES PRODUCTS PREFERENCE: When agricultural, dairy, timber, lumber, or fisheries products are purchased using state money, only those products harvested in Alaska, or in the case of fisheries products harvested or processed within the jurisdiction of Alaska, will be purchased, provided they are available, of comparable quality, and priced no more than 7% higher than products harvested outside the state, or in the case of fisheries products harvested or processed outside the jurisdiction of the state, in accordance with AS 36.15.050.

4. ALASKA PRODUCT PREFERENCE: A bidder that designates the use of an Alaska Product which meets the requirements of the ITB specification and is designated as a Class I, Class II or Class III Alaska Product by the Department of Commerce & Economic Development shall receive a preference in the bid evaluation in accordance with AS 36.30.332 and 3 AAC 92.010.

5. EMPLOYMENT PROGRAM PREFERENCE: If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b), and is offering goods or services through an employment program, as defined under 36.30.990(10), and is the lowest responsive and responsible bidder with a bid that is no more than 15 percent higher than the lowest bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(c) and 2 AAC 12.050.

6. ALASKANS WITH DISABILITIES PREFERENCE: If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b), and is a sole proprietorship owned by a person with a disability, as defined in AS 36.30.170(j), and is the lowest responsive and responsible bidder with a bid that is no more than 10 percent higher than the lowest bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(e).

7. EMPLOYERS OF PEOPLE WITH DISABILITIES PREFERENCE: If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b), and, at the time the bid is submitted, employs a staff that is made up of 50 percent or more people with disabilities, as defined in AS 36.30.170(j), and submits a responsive and responsible bid that is no more than 10 percent higher than the lowest responsive and responsible bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(f).

8. PREFERENCE QUALIFICATION LETTER: Regarding preferences 5, 6, and 7, above, the Division of Vocational Rehabilitation in the Department of Education maintains lists of Alaskan; [1] employment programs that qualify for preference, [2] individuals who qualify for preference as Alaskan's with disabilities, and, [3] employer's who qualify for preference as employer's of people with disabilities.

As evidence of an individual's or a business' right to a certain preference, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of the preferences 5, 6, or 7, above, an individual or business must be on the appropriate Division of Vocational Rehabilitation list, at the time the bid is opened, and must provide the procurement officer a copy of their certification letter. Bidder's must attach a copy of their certification letter to their bid. The bidder's failure to provide the certification letter mentioned above, with their bid, will cause the state to disallow the preference.

DEFAULT: A contractor's failure to comply with any of the terms and conditions of this contract may result in a default action by the state.

COMPLIANCE: The bidder must comply with all applicable national, federal, state, local and borough regulations, codes, and laws; be liable for all required insurance, licenses, permits and bonds; pay all applicable federal, state, local and borough taxes.

NOTICE OF INTENT: After the responses to this ITB have been opened and evaluated a tabulation of the bids will be prepared. This tabulation, called a Notice of Intent, serves two purposes. It lists the name of each company or person that offered a bid and the price they bid. It also serves as notice of the state's intent to award a contract(s) to the bidder(s) indicated. A copy of the Notice of Intent will be mailed to each company or person who responded to the ITB. Bidders, identified as the apparent low responsive bidders, are instructed not to proceed until a Purchase Order, Contract Award, Lease, or, some other form of written notice is given by the Contracting Officer. A company or person who proceeds prior to receiving a Purchase Order, Contract Award, Lease, or, some other form of written notice from the Contracting Officer does so without a contract and at their own risk.

PAYMENT FOR STATE PURCHASES: Payment for agreements under $500,000, for the undisputed purchase of goods or services provided to a state agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement which establishes a lower interest rate or precludes the charging of interest.

FEDERAL EXCISE TAX: The State of Alaska is exempt from Federal Excise Tax except the following:

* Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
* "Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
* Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;
* Air Passenger - IRC, Section 4261 - on the purchase of passenger transportation services by air charter.

CONTRACT ENFORCEMENT: Enforcement of this contract is the responsibility of the Division of General Services (DGS) contracting officer. When a state agency has a complaint concerning a contractor's performance the agency must contact DGS in writing. Facsimile notification at (907) 465-2189 is also acceptable. DGS will contact the contractor and resolve the matter.

FIRM AND UNQUALIFIED (UNCONDITIONAL) OFFER: Bidder's must provide enough information, with their bid, to constitute a definite, firm, and unqualified or unconditional offer. In order to be responsive a bid must constitute a definite, firm, and unqualified or unconditional offer to meet all of the meaningful or material terms of the ITB. Some meaningful or material terms are those items which could affect price, quantity, quality, or delivery. Also included as meaningful or material terms are those which are clearly identified in the ITB, and which, for reasons of policy, must be complied with at risk of bid rejection for nonresponsiveness.

BIDDER'S NOTE: This contract involves financial risks. Please read this ITB very carefully and make certain you understand the risks and responsibilities. If you have any questions contact the contracting officer at: Voice (907) 465-2253, TDD (907) 465-2205 or FAX (907) 465-2189.

HOLD HARMLESS: The contractor will indemnify, save harmless and defend the state, its officers, agents and employees from all liability, including costs and expenses, for all actions or claims resulting from injuries or damages sustained by any person or property arising directly or indirectly as a result of any error, omission or negligent act of the contractor, subcontractor or anyone directly or indirectly employed by them in the performance of this contract.

All actions or claims including costs and expenses resulting from injuries or damages sustained by any person or property arising directly or indirectly from the contractor's performance of this contract which are caused by the joint negligence of the state and the contractor will be apportioned on a comparative fault basis. Any such joint negligence on the part of the state must be a direct result of active involvement by the state.

INSURANCE: The contractor will maintain insurance satisfactory to the Division of Risk Management, Department of Administration. Certificates of Insurance will be furnished to the Contracting Officer which will provide for a 30 day prior notice of cancellation, nonrenewal or material change in such insurance.

Proof of insurance is required for the following:

A. Protection and Indemnity, including crew exposure, in the amount of $1,000,000.00.

Failure to supply satisfactory proof of insurance within the time required will cause the state to declare the bidder nonresponsible and to reject the bid.

METHOD OF AWARD: Award will be made to the lowest responsive and responsible bidder.

PURPOSE: Contract of a vessel, with captain and three crew, for the use of Department of Fish and Game (DF&G) as living quarters and an operations base for monitoring and research activities relating to king crab research studies within the Bristol Bay Registration Area T of the Bering Sea. DF&G will place 3 or 4 of their personnel aboard the vessel. Biologists will study the crabs which are captured and monitor all catches. A total of thirty (30) days of charter time will be devoted to at-sea research, cost recovery fishing (harvesting commercial crab concentrations) and support activities for the training of shellfish observers.

LENGTH OF CONTRACT: Approximately thirty (30) continuous days, as biological and weather conditions permit, between approximately September 26, 1994 and October 26, 1994. The length of the charter and starting date may vary by mutual agreement between the vessel owner and the State of Alaska but payment will not exceed the thirty (30) day period.

CANCELLATION: This contract could be cancelled or modified pending results of the 1994 National Marine Fisheries Service Bering Sea crab stock assessment survey. The state reserves the right to cancel the contract at the state's sole discretion.

Secondly, the state will have the sole discretion to cancel any contract that results from this ITB after the charter has commenced, if it is determined by the state that there is an insufficient quantity of crabs to cover the state's expense and the cost of the charter.

ESTIMATED USE: The charter dates and length of charters referenced in this ITB are the state's estimated requirements. The state does not guarantee a minimum or maximum number of charter days.

TEST FISH PROGRAM: The Test Fish Program was established by the legislature [AS 16.05.050 (15)] to allow the Department of Fish and Game to conduct research programs funded by the sale of fish caught during research. The Department of Fish and Game's expense for this research is $342,000. The charter will be financed as follows:

> DAY 1 TO DAY 28: Combined at-sea research work and cost recovery fishing. Approximately 21 days will be devoted to at-sea research and 7 days will be devoted to directed cost recovery fishing. Overlap of these two activities is expected near the end of the charter period. During cost recovery fishing, revenues for the project will be generated by retaining 100% of the male red king crabs greater than six inches in carapace width.
>
> DAY 29 TO DAY 30: Delivery of cost recovery crabs and onboard observer training. The vessel will serve as a platform for the state's mandatory observer program at the delivery site in Dutch Harbor, AK. The captain and appropriate crew must be onboard for this purpose.

RISK TO VESSEL OWNER: Because the funding for this charter is totally dependent on the crab catch, the charter involves a monetary risk. You may receive less than the amount you bid and there is also a risk of not receiving anything. When you sign your name to this ITB, you are agreeing to take that risk.

PAYMENT FOR THE CHARTER: The vessel owner/captain will be paid the amount bid up to the maximum thirty (30) days, or the amount of revenue generated by the crab sold, less $342,000 for the Department of Fish and Game's fixed expenses, whichever is the least.

(1) If attained, the State will retain the first $200,000 from the receipts of harvested crabs, which will be sold under the Department of Fish and Game's Test Fish Program.

(2) If attained, the vessel owner will receive up to $50,000 in the form of a check from the state from the next $50,000 in receipts of harvested crabs.

(3) If attained, the state will receive the next $142,000 in receipts of harvested crabs.

(4) If attained, the vessel owner will receive either the remaining amount of receipts from the crab harvest up to the bid price of the charter or the balance of the crab harvest, whichever is the least.

The vessel will fish in the manner directed by the state officials until sufficient crabs are obtained to cover costs to the State of Alaska ($342,000) plus the cost of the vessel charter, or until thirty (30) days have elapsed.

LOCATION OF VESSEL OPERATION: Bristol Bay Registration Area T, in the Bering Sea. The charter will begin and end in Dutch Harbor, Alaska.

DUTIES OF CONTRACT: In the role of operations base and living quarters for state personnel, the vessel, its captain and crew will be required to provide these services and accommodations:

A. General navigation and operation of the vessel either underway or at anchor.

B. Space for compiling and analyzing the data collected.

C. Communications base for dispersing information.

D. Basic living accommodations for 3 or 4 state biologists and technicians.

E. Meal preparation, cooking and clean-up.

F. General cleaning of the interior and exterior of the vessel.

G. General assistance to the state personnel in the performance of their work. Crew will be expected to handle catches as prescribed by the crew leader and will be expected to fish the gear. The biological crew will handle sampling of catches once they are aboard the vessel.

H. Provide 150 pots, with lines, buoys, and bait jars. All pots must be identical in size and dimension, including mesh sizes on all panels.

G. The Captain must provide a safety orientation briefing to all vessel and biological crew members prior to embarkation from Dutch Harbor. Both the crew and personnel must have general instructions on the following:

1. The location and operation of lifesaving and emergency equipment (life rings, life rafts, immersion/survival suits, activating general alarm).

2. Operation of assigned equipment.

3. How to make a distress call.

4. What to do in the event of a person overboard.

5. What to do in the event of a fire.

6. What to do in the event of flooding.

7. What to do in the event of abandon ship order.

VESSEL INSPECTION: The vessel will be subject to inspection by the Department of Fish and Game. The bidder(s) must, upon 10 days notice, make the vessel available for inspection at Dutch Harbor, Alaska.

By the date set for the vessel inspection, all of the equipment called for in this ITB must be installed and functional. The successful bidder must pay the cost of all the equipment and of any vessel alterations needed to meet the requirements of this ITB.

If, at the time of inspection, a vessel fails to meet the ITB requirements, the state may consider the offer non-responsive and reject the bid or terminate the contract.

CERTIFICATE OF INSPECTION: The responsive bidder must submit a copy of its USCG "Fishing Vessel Safety Inspection" which must be current and valid through the charter period. The bidder's failure to supply this document, within the time required, will cause the state to declare the bidder nonresponsible and to reject the bid.

SEAWORTHINESS: Inspection of the vessel is not intended to convey acceptance by the state nor should it be considered conclusive evidence that the state believes the vessel is seaworthy. If during the department's inspection or at any time during the subsequent term of the contract, conditions are noted that might affect the safety or seaworthiness of the vessel, the state will arrange for further inspection by a person with the appropriate credentials to determine if the condition of the vessel is acceptable.

VESSEL REQUIREMENTS:

A. Length of not less than ninety feet. Length will be determined by measuring the centerline.

B. Sleeping space for 3 or 4 state personnel, in addition to the captain and crew. Each sleeping space used by state personnel must be at least 26 inches in width at the shoulders and 77 inches long.

C. Minimum nine cubic feet of dry storage drawer space for state equipment.

D. Minimum six square feet of flat, clear, interior work space for daily data entry work by state personnel. Galley table is acceptable. One 110 volt AC outlet must be available near this area.

Minimum four square feet of flat, clear, interior work space, either shelf or table, in a relatively undisturbed location, for semi-permanent installation of an electronic data entry device during the charter period. One 110 volt AC outlet must be available near this area.

E. Minimum 500 square feet of flat, clear, exterior deck work space for state personnel. Vessels with shelter decks are highly preferred. This work area must be well lit (direct lights within a radius of six feet of state personnel) to permit work at night, including data recording and tagging. If fixed lighting is unavailable, responsive vessels must have mobile lighting, power cords, and all associated accessories to make a temporary installation of required lighting.

F. Stove, oven, sink, galley table, and all materials and equipment necessary for daily meal preparation, cooking, and clean-up.

G. Refrigerated storage space sufficient to maintain fresh food for all personnel for the duration of longest continuous period of operation.

H. Freezer storage space sufficient to maintain frozen food for all personnel for the duration of longest continuous period of operation and sufficient to maintain frozen bait herring for the duration of longest continuous period of operation.

I. Water storage or seawater conversion capable of providing sufficient fresh water to permit 30 continuous days of operation. Water supply must be sufficient to permit daily washing of dishes, clothing, and showers for all personnel.

J. Radar, with a minimum range of 40 miles, in good operating condition.

K. Automatic pilot in good operating condition. Automatic readout Loran C. Back-up system is desirable. Fathometer with 150 fathom range. Back-up system is desirable. Minimum of two anchors with ground tackle; all of the size and type required for the size and type of vessel chartered.

L. Radio transmitter and receiver in good operating condition equipped with standard marine frequencies for the area in which operations will be conducted including VHF channels 7 and 16. Radio-transceiver with at least 25 watt output capable of operating on standard marine frequencies. Radio-transceiver: Single side-band frequencies 2309 (for receiving) and 2131 (for transmitting) to allow direct communication with RCA Alaska Communications, Inc. Back-up system is desirable.

M. USCG approved first-aid kit.

N. USCG approved fire-fighting equipment of the size and type required for the size and type vessel chartered.

O. USCG approved life rafts. The rated capacity of the rafts must be adequate to accommodate all of the people aboard the vessel, this includes the captain, the vessel crew and all of the biological crew.

P. Survival suits are required for all of the people aboard the vessel. This includes the captain, the vessel crew, and all of the biological crew. Sizes large and extra-large.

Q. The vessel's main engine(s) must be diesel powered. Bids offering gasoline powered vessels will be rejected as nonresponsive.

R. Power block to pull crab gear, minimum capacity 650 pounds.

S. Bait chopper and sampling table (minimum 4 feet by 8 feet) for biologists.

T. Skiff and outboard engine, minimum length of 10 feet and minimum 10 horsepower.

U. Survival gear as per Alaska Statute 20.35.110.

VESSEL CREW REQUIREMENTS:

(a) Crew to consist of a captain with at least five (5) years of crab pot fishing experience in the Bering Sea and three (3) experienced fishermen. One of the fishermen must be an engineer with five (5) years experience aboard fishing vessels and fully knowledgeable of the vessel and equipment. Vessel crew will be expected to perform cooking and cleaning duties in addition to operating the vessel and assisting biologists by handling catches as prescribed by the biological crew leader.

(b) The vessel crew will be expected to fish the gear. The biological crew will handle sampling of catches once they are aboard the vessel.

(c) The state will have the right to require replacement of any vessel crew member. If the vessel operates shorthanded due to replacement or illness of a vessel crew member for a period in excess of twenty-four (24) hours, the state will deduct from the charter rate for that period of time an amount equal to the missing crewman's wages and related direct cost of employment (i.e., social security tax, unemployment insurance, etc.). The total cost of replacing a vessel crew member aboard the vessel will be at the owner's expense. The owner will be responsible for payment of wages, direct cost of employment and responsible for all vessel crew members. The state will be responsible for payments of daily charter rates only, and will not reimburse the owner for vessel crew wages.

(d) Captain will be required to complete proper fishing forms for each day of fishing, including recording weather conditions and fishing location data. Captain and vessel crew will be required to locate scheduled fishing areas.

(e) There shall be no abuse of alcohol or controlled substances aboard the charter vessel during the charter. Excessive consumption of alcohol will be determined by the biological crew leader and/or the captain and may be cause for immediate (in some cases temporary) termination of the contract.

UNUSUAL HOURS: It may be necessary to run the vessel 24 hours continuously to travel from one location to another. Further, it may be necessary to set or lift gear at night (midnight) or early in the morning (midnight to 6 a.m.).

DELAYS OR INTERRUPTIONS OF OPERATIONS: For each hour of contract time lost, for any reason other than weather or an act directly attributable to state personnel aboard the vessel, the state will, on each occasion, be entitled to deduct from the total contract payment, an amount equal to the hourly contract rate for each of the hours the vessel or essential equipment on the vessel is out of service.

TERMINATION OF THE CONTRACT: The state may, without fault or liability, terminate the contract for any of the following reasons:

1) The condition of the vessel or essential equipment on the vessel remains such that it cannot be used for work by the biological crew for a period of more than seventy-two (72) hours.

2) Lack of funds for the contract project.

3) Insubordination and/or lack of cooperation by the captain or vessel crew.

4) Failure of the captain, vessel, or vessel crew to report at the time and location specified in this ITB to begin the contract.

In the event of early termination of the contract, state-owned gear may be placed in storage or returned to a location that is mutually agreed upon by the state and the vessel owner. Charges for gear storage will be paid by the state. The state will not assume any liability for transporting the captain and vessel crew to their home port. Contract payments will cease on the hour and date the vessel is unable to continue normal operations.

COMMAND OF THE VESSEL: The captain's orders will be final in matters regarding the general operation of the vessel, the operation of the vessel's equipment and fishing gear, the general activities and safety of the vessel crew and biological crew, and the navigation of the vessel.

The captain will obey all orders given by the biological crew leader regarding the state's research activities, provided that those orders do not endanger the vessel or the people aboard the vessel.

The captain will obey all USCG, state and other applicable regulations, rules, and statutes pertaining to the safe and legal operation of the vessel.

CONSUMABLES TO BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE PER DAY CONTRACT PRICE: The contractor will provide all fuel, lubricants, oils, greases and filters required during the contract. At the beginning of the contract all fuel and lubricant tanks must be full and all filters must be fresh. In addition, the vessel must have aboard extra lubricants, oils, greases and filters in amounts sufficient for the entire contract period.

The contractor will provide all bait for the entire charter period.

The contractor will provide three ample, balanced, and nutritious meals each day for all biological crew, the vessel captain and the vessel crew.

MISCELLANEOUS PROVISIONS: The state may, at it's own expense and only for the term of the contract, install and retain in the vessel equipment necessary to accomplish their work. The state will remove this equipment at the termination of the contract period without damage to the vessel.

STATE OF ALASKA
INVITATION TO BID #1097

VESSEL INFORMATION FORM: Bidders must complete the vessel information form below. A bidder's failure to complete the vessel information form may cause the state to reject the bid as nonresponsive.

VESSEL INFORMATION FORM

OWNER'S NAME: _____ ADDRESS: _____

PHONE: ( ) _____ _____

VESSEL NAME AND NUMBER: _____ VESSEL TYPE: _____

CURRENT LOCATION OF VESSEL: _____

CALL NUMBERS AND FREQUENCY: _____ YEAR BUILT: _____

REGISTRY NUMBER: _____ CRUISING SPEED KNOTS: _____

OVERALL LENGTH: _____
[Straight line measurement from end to end over the deck, excluding sheer, measured parallel to the centerline.]

DIESEL POWERED MAIN ENGINE [ ] YES [ ] NO

HAS THE VESSEL BEEN INSPECTED BY THE USCG
WITHIN THE LAST 12 MONTHS [ ] YES [ ] NO INSPECTION DATE _____

SURVIVAL EQUIPMENT: The state requires that the life rafts carried aboard the vessel be USCG approved. The rated capacity of the life rafts must be adequate to accommodate all of the people aboard the vessel. In addition to the life rafts, survival suits are required for all of the people aboard the vessel, this includes the captain, the crew and all state personnel.

Bidders must provide life rafts to accommodate at least eight people. Indicate the brand, capacity, and USCG approval number for the life raft you will carry aboard the vessel.

	Raft Brand/Capacity	**USCG Approval Number**
Example:	Beaufort / 8 person	160.051/126/3

	Raft Brand/Capacity	**USCG Approval Number**
a.	_____	_____
b.	_____	_____
c.	_____	_____

Bidders must provide at least eight survival suits. Indicate the brand and model of survival suits you will carry aboard the vessel.

Survival Suit Brand/Model

a. _____

b. _____

c. _____

Failure to specify survival suits and USCG approved life rafts to accommodate at least eight people will cause the state to declare the bidder nonresponsive and to reject the bid.

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By the date set for the vessel inspection, all of the equipment called for in this ITB must be installed and functional. The successful bidder must pay the cost of all the equipment and of any vessel alterations needed to meet the requirements of this ITB.

If, at the time of inspection, a vessel fails to meet the ITB requirements the state may consider the offer nonresponsive and reject the bid or terminate the contract.

Is all of the equipment called for in this ITB installed and functional on the date of bid opening?

YES _____ NO _____

If "NO", indicate exceptions which will be corrected prior to the date set for the inspection by the state:

_____

_____

_____

NOTE: All of the equipment called for in this ITB must be installed and functional at the time of the vessel inspection.

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USCG LICENSE: The vessel captain must be licensed in accordance with Title 46, Code of Federal Regulations (CFR), Subpart D "Professional Requirements for Deck Officers Licenses". This contract requires, at a minimum, the following license: Operator of Uninspected Passenger Vessel for Inland Waters, previously known as a Six Passenger License.

In the space provided, bidder's must enter the name of the person who will serve as captain of the vessel. That person must be properly licensed. A photo copy of that person's USCG license should be submitted with the bid and must be submitted within 10 days of the state's request. A bidder's failure to provide a copy of the license, as stated above, may cause the state to consider the offer nonresponsive and reject the bid.

If during the term of the contract, a different person is retained as captain, a photo copy of that person's license must be submitted to the contracting officer prior to the time the person begins working as vessel captain. The contracting officer must accept and authorize the change of captains. The contractor's failure to follow this procedure may cause the state to terminate the contract.

On the line below, print the name of the person who will serve as captain.

_____
VESSEL CAPTAIN

Identify the rating held by the person named above.

[ ] Operator of Uninspected Passenger Vessel/Six Passenger
[ ] Inland [ ] Near Coastal

[ ] Master, 25 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 50 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 100 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 150 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 200 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 500 Ton Vessel
[ ] Inland [ ] Near Coastal

[ ] Master, 1600 Ton Vessel
[ ] Inland [ ] Near Coastal

CREW REQUIREMENTS: At a minimum, the vessel crew will consist of a captain and three crew members. The contractor will be responsible for payment of wages, direct cost of employment and fringe benefits, if any, to the vessel crew members. The state will be responsible for payment of the daily charter rate only and will not reimburse the contractor for crew wages in addition to the charter rate.

CAPTAIN AND CREW EXPERIENCE INFORMATION: Bidders must complete the captain and crew information form below. Bidders failure to complete the captain and crew information form may cause the state to reject the bid as nonresponsive.

CAPTAIN AND CREW EXPERIENCE REQUIREMENTS: Captain must have a minimum of five years experience in crab-pot fishing operating in Alaskan waters. Captain must have a minimum of one years experience, as a captain, in the type and size vessel specified for this contract.

Captain's experience operating in Alaskan waters. _____ years.

Captain's experience, as a captain, in various size, type/class vessels.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

STATE OF ALASKA
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Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

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One of the crew must be an engineer. The engineer must have a minimum of five years experience as an engineer in the type and size vessel specified for this contract.

Engineer's experience, as an engineer, in various size, type/class vessels.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

Size type/class of vessel:_____.

Number of years experience in this size type/class of vessel:_____years.

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BID SCHEDULE

CONTRACT RATE $_____ x 30 DAYS = $_____
PER DAY TOTAL BID PRICE

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FOR STATE USE ONLY: This Covers: PR#11-309-94.